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CITY DOCUMENTS

OF THE

CITY OF LOWELL,

MASSACHUSETTS,

FOR THE

YEAR 1898-1899.



LOWELL, MASS.:
COURIER-CITIZEN CO., PRINTERS.
1899.

EXTRACT FROM THE ORDINANCES OF LOWELL.

CHAPTER VIII. -- CITY DOCUMENTS.

SECTION 5. All City Documents (except the Rules and Regulations for the Government of the Police and Fire Department) shall be printed in pamphlet form of the size of the Annual Report of the School Committee.

SECTION 6. All City Documents shall be bound together in one volume, under the direction of the City Clerk, and three or more copies shall be placed in the City Library, and one copy in the library of the Middlesex Mechanics' Association, one copy shall be sent to each City of the Commonwealth, to the library of the Harvard College, the Public Library of Boston, the State Library, the Smithsonian Institute at Washington, and the Old Residents' Historical Association of Lowell.

CONTENTS.

1. Inaugural Address of His Honor, Jeremiah Crowley, Mayor, to the City Council, Jan 2, 1899.
2. Municipal Register, containing Rules and Orders of the City Council, and a list of the Government and Officers of the City of Lowell, for 1899
3. Seventy-Third Annual Report of the School Committee of Lowell, together with Thirty-Fifth Annual Report of the Superintendent of Schools. 1898
4. Auditor's Sixty-Third Annual Report of the Receipts and Expenditures of the City of Lowell, together with the Treasurer's Account, and the Account of the Commissioners of Sinking Fund, for the financial year ending Dec 31, 1898.
5. Twenty-Sixth Annual Report of the Lowell Water Board, and Reports of the Superintendent of Water Works and the City Engineer to the Water Board, for 1898.
6. Report of the Overseers of the Poor, with the accompanying papers, 1898.
7. Reports of the Births, Marriages and Deaths. 1898.

8. Report of the Board of Health, 1898.
9. Report of the Inspector of Milk and Vinegar, 1898
10. Report of the Superintendent of Streets 1898.
11. Report of the Chief Engineer of the Fire Department, 1898.
12. Report of the Superintendent of Street Lights, 1898.
13. Report of the Board of Police, for the year ending June, 1899.
14. Report of the Trustees of the City Library, 1898.
15. Report of the City Solicitor, for the year ending Feb. 28, 1899.
16. Report of the Superintendent of City Scales, 1898.
17. Report of the Sealer of Weights and Measures, 1898.
18. List of Jurors for the year 1898.



ADDRESS

OF

HON. JEREMIAH CROWLEY

MAYOR OF LOWELL

January Second
Eighteen hundred ninety-nine.

LOWELL, MASS.:
LOWELL SUN PRINT, SUN BUILDING.
1899.

ADDRESS
OF
HON. JEREMIAH CROWLEY
MAYOR
TO THE CITY COUNCIL

January 2, 1899

GENTLEMEN OF THE CITY COUNCIL :

By the consideration of our fellow citizens, we are here on the threshold of the new year to take upon ourselves the responsibilities and duties of servants of the city of Lowell for the ensuing year. Those responsibilities and duties were not thrust upon us against our consent, but were sought by us, and thankfully received as honors bestowed by our fellow citizens, but the greater honor will lie in the honest and faithful discharge

of the duties imposed upon us as public servants of the city.

Within the past year our country engaged in a successful war with Spain; thousands upon thousands of the youth of the land volunteered to follow and defend the flag in response to the call of the constituted authorities. The brave youth of Lowell, following the example set by their fathers in 1861 were found in the fore-front of the battle thereby bringing credit to their city, and lasting honor on themselves. They were gone from us but a short while. Some came back sick and emaciated to die, and now fill soldiers' graves. We deplore their deaths and sympathize with their relatives and friends, who are left to mourn.

“Nor shall their glory be forgot,
While Fame her record keeps,
Or Honor points the hollowed spot
Where Valor proudly sleeps.”

The watchwords of each new administration of our municipal government have been: “Economy and efficiency.” I assume that each of us has no desire to do aught else than to do our whole duty in a just and fair administration of

the duties of our respective offices during the coming year. It would be well for us now to consider how far we can be economical and how much can be attained in that direction the current year, with a due regard for the welfare of the citizens, and the best interest of the municipality.

I have been unable in the short time allowed me since the municipal election, more particularly by reason of an ordinance that was passed and approved January 1, 1898, which says: "It shall be the duty of the Auditor to close all regular annual appropriation accounts with the last secular day in December, of the year for which the appropriations are made," to furnish you to-day with any figures or data from the Auditor's office; they will be before you later as they will appear in the Auditor's report, but I have been kindly furnished by Mr. Kirby, clerk of the Board of Assessors, with some figures from that office, among which I find that the limit of the appropriation for current expenses for the year 1899 is \$841,988.72, as figured under Chapter 312 of the Acts of 1885, or \$849,269.24, as figured in accordance with Chapter 217 of the Acts of 1893. The sum that may be appropriated by the City

Council for the current expenses of the present year, can in no event exceed the last named sum.

It is pleasing to me to acknowledge the kindness of my predecessor in this office for sending to me a number of valuable papers, containing information which will be of great service to me. I find among these papers a most complete list of the departments. Among the most prominent are the fire, streets, schools, schoolhouses and police departments. Then there are the various sinking funds, the city debt and interest on the same; there are various other departments in the administration of the municipal government that must be provided for in the annual appropriations.

Those departments and their estimated expenses for the current year will be placed before you in other communications from me.

In order to economize, upon which department will we commence? Will it be in our schools, that some of our fellow citizens say are growing more expensive every year? Would you curtail the usefulness of our schools by a stinted policy, and as we all believe that in them are now being trained the future possible rulers of the republic?

Will it be in our school houses? We have long since got past the little red schoolhouse, and the old fashioned, substantial brick building. They have been replaced by more modern and costlier structures.

Perhaps we might commence on the Police Department, but from all the information we can receive in regard to that department it is in the highest state of efficiency and discipline, and it is said the police guard our lives and property while we sleep. Can we pursue a stinted policy towards that department, and not impair its efficiency, and will such a policy commend itself to our fellow citizens? We have a Fire Department that in every particular ranks among the highest; the houses and apparatus of the department are in excellent condition, the energy and discipline of the men are beyond question. What will we say of the Pauper Department? Away in the early 70's the Overseers of the Poor were chosen from the members of the City Council. Six common councilmen and two members of the board of aldermen, and the mayor was a member and chairman of the board by virtue of his office. All applications for out-door relief were made to the

mayor. The city messenger with his other duties investigated all such applications, and as he reported favorably or unfavorably, aid was granted or withheld, but we have outgrown those old inexpensive ways, we have a secretary of the board of Overseers of the Poor and two or three clerks, and the small insignificant buildings that constituted the poor farm have given way to modern, well appointed establishments where our poor and insane are housed, cared for and nourished. Can we economize in this department? So we might go through the whole list of departments and the same question might be asked. In view of the great debt of the city upon which we are paying interest annually the sum of \$150,000, and our close proximity to the borrowing and debt limits of the city, it becomes a serious and important problem, difficult of solution. Upon you will come the burden to solve the problem. Will it be by inserting the pruning knife of economy along the whole line? Will you set your faces against costly street extensions and improvements, build sewers only where and when absolutely needed and necessity demands? Those are sure ways to keep within the bounds

on the lines of economy, but will such a policy be deemed a parsimonious one or conducive to the welfare of the city?

I have no hesitation in recommending to you that all street extensions and improvements that are not absolutely needed, or sewers that are not of immediate necessity, should be forced to await the advent of more prosperous times. In all your actions tending towards the economical administration of the municipal government for the current year, you will have my hearty support.

At the beginning of each year appropriations have been made as was supposed to carry the departments through the year. There must be faulty calculations somewhere, or else gross carelessness and extravagance in the expenditure of the money of the city. It must be one or the other, because it has become a custom before the expiration of the year to raise money by loan to meet the demands of the several departments to pay the current expenses. The raising of loans for such purposes should be avoided, because no business corporation, or any business man could live in business and pursue such a policy. Our city, as a business corporation, could not be ex-

pected to prosper under such management. Money sufficient for the economical needs of the several departments should be appropriated, and heads of departments should be held to a strict accountability for the prudent expenditure of the same.

By the new amendments to the City Charter, the Mayor is given power to suspend or remove any executive or administrative officer for such cause as the Mayor shall deem sufficient. Careless, reckless and extravagant expenditure of the money of the city, shall be deemed sufficient cause by the Mayor to remove any officer who may so offend. I trust that no such exigency will arise as I am fully convinced that you, in your wisdom and discretion will select no man to any office unless he be a man of reputed sterling honesty, and will, to the best of his ability, promote the interest of our city.

In the last municipal election, agreeably to the law, the question of licensing the sale of intoxicating liquors in Lowell was submitted to the people, and they, by a decisive vote, said no license should be so granted. We must submit to the will of the people, and no liquors can be legally sold in Lowell from May 1, 1899, to May

1, 1900, except for medicinal or mechanical purposes, and the question has been asked since the election, "Will the Mayor enforce the law?" The answer to the question is, that the Police Department will enforce the law under the direction of the gentlemen who compose the Police Commission. The Mayor or city government of Lowell have no control over the police because by the force of the statute, Chapter 187, of the year 1895, "All the powers that were heretofore vested in the Mayor and City Council of Lowell in regard to the Police Department, were vested in the Police Commission." So that the duty of enforcing the law rests with the Police Commission. That they will do it there is no shadow of doubt, because if the public press be right, they themselves have said it. As for myself, I have the utmost confidence in the Police Commission. They are gentlemen of standing and character, having large manufacturing and property interests here, and desire the good opinion of their fellow citizens, therefore they will carry out the will of the people.

In whatever action the Police Commissioners may take to enforce the law they will have my cordial and hearty support.

I would call your attention to the Board of Assessors. The board now consists of three principal assessors and six assistant assessors and they in turn are assisted by a principal and several assistant clerks. Prior to the time of the passage of the ordinance creating the board, as it is now constituted, all the work of the Assessors' office was done by six assessors chosen from the several wards, as the city was then divided, and a few clerks that were called in to assist as the press of business demanded. Frequent law suits were brought against the city by several of the corporations on account of excessive or faulty assessments made upon them by the Board of Assessors. These law suits were vexatious to the citizens, and a drain upon the city treasury. During the administration of one of my worthy predecessors in the office of mayor, the Hon. Charles D. Palmer, the ordinance creating the board as it now stands and the present system of assessing in the Assessors' Department was established. At the time of its establishment it seemed to meet the approval of the citizens at large. The salaries of the principal and assistant assessors were since raised from time to time. It goes without saying,

that we have an excellent system of assessing and of conducting the affairs of the department; the only question is can the system be maintained at less cost. For the past three years the board has been like Mahomet's coffin, "hanging between heaven and earth," because two or three attempts have been made within the past three years to enact an ordinance reforming the whole board. Therefore I call your attention to this, so that some action may be taken by you to determine what the board is to be, for at present the six assistant assessors are hold-overs, the terms for which they were appointed having expired. The term of one of the principal assessors has also expired, so that you will at once see that speedy action must be taken so that we may have efficient work on the part of the assessors during the current year. If action is not taken I shall deem it my duty to appoint six assessors and not have the department run along as it has for some time past. It is better to have a board responsible and know their tenure of office, rather than to have a set of men living in a state of uncertainty and doubtful as to what they are to do or expect.

In this connection I would counsel you to act in a spirit of conciliation and harmony in choosing the officers it will be in your province to elect. The matter of the controversy in regard to purchasing and paying for books for the city library has been called to my attention by the librarian. I was under the impression that the matter had been fully settled by the opinion of our able City Solicitor, for whose opinion I entertain the highest respect, but in order to remove any doubt I would ask such action on your part, if any such action is needed, as will forever settle the question as to the right to select, purchase and pay for books for the city library.

Gentlemen, I have in my crude way endeavored to speak of some of the important questions that will come before you for your consideration during the year. It is an infirmity of the human mind that we cannot look upon matters of public policy alike, but we can strive with no partisan spirit to aim at conclusions and ends that will best subserve the interest of our city.

Lowell is the city of our homes, and our hearts' best affections. Some of us were born elsewhere. Some of us were born almost within the shadow

of the building in which we are now assembled. We were educated in its public schools and gambled in our boyhood days in its green fields and pleasant byways. Our kindred buried in its soil have long since mouldered into dust. Here we have lived all our lives, and expect to live until the "Giver of all good" shall call us to the life beyond. Let us then, in the beginning of the new year, at the commencement of our arduous duties, resolve that with the assistance of the Almighty God, to so administer the duties taken upon ourselves, that they will prove of lasting good to the city, so that when our labors for the year are closed our fellow citizens can say: "Well done, good and faithful servants."



MUNICIPAL REGISTER

CONTAINING

RULES AND ORDERS

OF THE

CITY COUNCIL,

AND A LIST OF THE

GOVERNMENT AND OFFICERS OF THE CITY OF LOWELL,

1899.



LOWELL, MASS.:

LOWELL SUN PRINT, SUN BUILDING.

1899.

JOINT RULES AND ORDERS OF THE CITY COUNCIL.

1. In the month of January, and not later than the second regular meeting after organization of each branch of the City Council, joint standing committees shall be appointed as follows :

A COMMITTEE ON CLAIMS.

A COMMITTEE ON EDUCATION.

A COMMITTEE ON FIRE DEPARTMENT.

A COMMITTEE ON LANDS AND BUILDINGS.

A COMMITTEE ON MILITARY AFFAIRS.

A COMMITTEE ON ORDINANCES AND LEGISLATION.

A COMMITTEE ON PRINTING.

A COMMITTEE ON STREETS.

A COMMITTEE ON COMMONS.

Each committee shall consist of two Aldermen and three members of the Common Council, except the Committee on Streets, which shall consist of two Aldermen and five members of the Common Council.

2. Each board shall, in such manner as it may determine, select its own members for any joint committee.

3. In all joint standing committees, except that on Finance, the member first named in the Board of Aldermen shall be chairman; on the Committee on Finance, the member first named in the Common Council shall be chairman; and in all

joint special committees, the member first named in the board where the business originates shall be chairman, and shall call the committee together.

4. Reports of committees shall be made to the board at first meeting after such reports are prepared and signed.

5. No committee shall act by separate consultation, and no report shall be received unless agreed to in committee actually assembled.

6. It shall be the duty of every joint committee (the Committee on Streets excepted), to whom any subject may be specially referred, to report thereon within five weeks, or ask for further time.

7. The by-laws of the city shall be termed ordinances; the enacting clause of which shall be—Be it ordained by the City Council of the City of Lowell, as follows: In all votes by which either or both branches of the City Council express anything by command, the form of expression shall be, Ordered, and whenever either or both branches express opinions, principles, facts or purposes, the form shall be, Resolved.

8. An ordinance may originate in either board, and shall be considered in three several stages. It shall first be read for information, and the question shall then be on ordering it to the Joint Standing Committee on Ordinances and Legislation, and then sent to the other branch for concurrence. When reported back, the recommendations of the committee shall first be acted on. It shall then be ordered to a second reading, it shall next be examined by a standing committee of that board, who shall see that it is drawn in proper form. When returned by such committee, the question shall be on ordering it to be enrolled. If so ordered, it shall then be

sent to the other board, where the same order of proceedings shall be observed. When it has been ordered by both branches to be enrolled, it shall be enrolled by the Clerk of the Common Council, and shall be by him submitted to the proper committee of that board to ascertain if it has been correctly enrolled. If so reported, the question shall be on passing it to be ordained. If it shall so pass, it shall be signed by the President of the Common Council, and be sent to the Board of Aldermen, where it shall take a like course. If passed to be ordained in that board, it shall be signed by the Chairman of the Board of Aldermen and sent to the Mayor for his approval.

9. An ordinance may be rejected in any stage, but may not pass through all its stages in the same day. Each board shall transmit to the other all papers on which any ordinance, joint resolution, or order shall be founded; and all papers on their passage between the two boards, shall be under the signature of their respective clerks, except ordinances and joint resolutions in their last stage, which shall be signed by the presiding officers. If papers come before either board which have been duly acted upon in the other board, the presiding officer shall so state without reading the endorsements of the clerk, unless the latter are called for.

10. All enrolled ordinances shall be written in a fair and legible hand, or typewritten, provided a permanent record ribbon is used, without interlineations or erasures, and no enrolled ordinance or resolution shall be amended.

11. Every joint resolution shall be read in the board in which it is introduced, and the question shall be upon ordering it to a second reading. If so ordered the question shall then be upon its passage. If passed, it shall be sent to the other board, where the order of proceeding shall be the same.

When passed by both boards, the resolution shall be presented to the Mayor for his approval, and when the same shall be in force, shall be enrolled by the Clerk of the Common Council, and when found correctly enrolled as provided in the case of an ordinance it shall be signed by the President of the Common Council and the Chairman of the Board of Aldermen, and be presented to the Mayor for his signature if he approved the original.

12. Joint orders shall require but one reading, and when adopted, shall be sent to the Mayor for his approval, except when they relate to a question of a convention of the two branches, or the election of any officer.

13. When either board does not concur with the other in any ordinance or resolution sent from the other, notice of such non-concurrence shall be given by a written message.

14. In any case of non-concurrence, each board may appoint a Committee of Conference. Such committee shall consist, in each case, of three members who support the vote of their own board. These two committees may meet jointly or separately, and a majority of each shall decide its action.

15. All reports and other papers submitted to the City Council shall be written in a fair hand, or typewritten, provided a permanent record ribbon is used, without endorsement, except in case of the introduction of an order or resolution. In such a case, the member introducing an order or resolution shall subscribe his name at the bottom of the back of the same. All other endorsements upon the back of papers shall be made by the clerk; and the clerks of the boards respectively, shall, on seasonable notice, make copies of any papers to be reported by committees, at the request of the respective chairman thereof.

16. No business shall be transacted by the City Council in convention, except such as shall have been previously agreed on, unless by unanimous consent.

17. In balloting in joint convention, blanks shall be reported but not counted as votes.

18. When both boards are in session at the same time, neither shall adjourn without giving notice to the other of its intention.

19. All petitions, reports, or other papers of whatever description, relating to business requiring the concurrent action of both boards of the City Council, shall be submitted by committees to the clerk of each board at least twenty-four hours before the time of meeting of either board, and the clerk of each board shall prepare a brief synopsis of all matters to be acted upon, and place the same on the desk of each member of the City Council prior to the hour of opening the meeting. No reports or orders not previously furnished as herein described shall be considered in either branch unless two-thirds of the members present consent thereto.

These rules may be suspended for a specific purpose, or amended, whenever twenty-four members of a joint convention of the two branches shall so direct, or whenever a joint order to that effect shall be passed by the votes of six members of the Board of Aldermen and eighteen members of the Common Council.

21. No resolution for the extension and laying out of any street or public highway shall be passed to a second reading by either branch of the City Council until the city civil engineer shall certify to the council that said street or highway is fully completed, and graded to the grades named in the resolution, without expense to the city.

22. A yea and nay vote of the members of the City Council shall be required to pass any order or vote involving the expenditure or the appropriation of the public moneys, or involving any debt or liability, and such vote shall be entered upon the records of each branch of the City Council.

23. Less than a quorum of each branch of the City Council may adjourn to a fixed day earlier than the regular meeting, and shall have power to compel the attendance of all absent members in such manner as the City Council may by ordinance provide.

24. In the absence of rules governing both boards of the City Council, Cushing's Manual shall decide the point.

RULES AND ORDERS OF THE BOARD OF ALDERMEN.

1. At the appointed time the presiding officer shall take the chair, and on the appearance of a quorum, proceed to business.

2. The order of business shall be as follows :

First.—At all regular meetings the journal of the last regular meeting and all intervening meetings of the board shall be approved without reading, unless the reading be called for by some member of the board.

Second.—Petitions and similar papers.

Third.—Appointments, elections, etc.

Fourth.—New business, which, unless otherwise ordered, will take its place at the foot of Orders of the Day.

Fifth.—Orders of the Day, consisting of unfinished business of the last previous meeting, papers from the Common Council and such matters as have been introduced as new business. By a vote of six members, any matters in the Orders of the Day, may at any time be taken up for immediate consideration.

3. The presiding officer shall decide all points of order, subject to appeal. He may read while sitting, but must rise to put a question. He shall allow debate on a question until the vote has been declared, but not on the verification of a

vote; and on a demand of two members shall take every vote by yeas and nays.

4. When a question is under debate, the presiding officer shall receive no motion but to adjourn, to take up a special assignment, to lay on the table, to postpone to a day certain, to commit, to amend, or to postpone indefinitely. These several motions shall have precedence in the foregoing order, and debate upon any of them shall be confined to the actual motion, and shall not go into the merits of the main question, except on amendment.

5. When a vote has passed, except for adjournment or to lay on the table, any member voting with the majority may move a reconsideration, to be acted upon at the same meeting. Any member voting with the minority may move a reconsideration, to be acted upon at the next meeting, which latter motion shall have priority, if made before the motion first mentioned shall have been decided. Provided, however, that no motion of reconsideration made by a member voting with the minority shall be received on any subsidiary or incidental question. No motion shall be twice reconsidered.

6. No member shall be interrupted while speaking, but by a call to order, or for the correction of a mistake; nor shall there be any conversation among the members while a paper is being read, or a question stated from the chair.

7. When any member is about to speak in debate, he shall rise in his place and respectfully address the presiding officer, shall confine himself to the question under debate, and avoid personality.

8. In the month of January the following committees shall be appointed:

- A COMMITTEE ON BILLS IN SECOND READING.
- A COMMITTEE ON ELECTRIC WIRES.
- A COMMITTEE ON ENROLLMENT.
- A COMMITTEE ON LICENSES.
- A COMMITTEE ON LIGHTING STREETS.
- A COMMITTEE ON SEWERS.
- A COMMITTEE ON WEIGHTS AND MEASURES.
- A COMMITTEE ON STATE AID.

The committees on Licenses, on Sewers, and on Electric Wires shall consist of three members each; the other committees shall be composed of two each.

9. Every member present shall be held obliged to vote on all questions, and not to leave without permission, if his presence is necessary to make a quorum.

10. The clerk shall prepare for the use of the board, a copy of the Orders of the Day, to which shall be added a list of matters laid on the table or postponed to a day certain.

11. When a reference is postponed to more than one committee the question shall first be upon a standing committee of the board, then a special committee, then a joint standing committee, and last a joint special committee.

12. These rules may be amended or suspended whenever two-thirds of the members present may so vote; but a motion to amend shall not be made and finally acted upon at the same meeting.

13. All nominations shall lie on the table three days at least before action thereon by the board.

14. All papers, of whatever description, which may require action by this board, shall be presented to the City Clerk not later than the hour of noon on the day of each regular meeting. Petitions, reports and other papers, presented after that hour on such day, will not be considered until the next meeting.

RULES AND ORDERS OF THE COMMON COUNCIL.

1. The President will take the chair precisely at the hour appointed for the meeting, call the members to order, and within ten minutes (or sooner, if a quorum be present), he shall cause the roll to be called, and the names of absentees recorded. In the absence of the President the oldest member present (meaning in time of service) shall call the Council to order, and preside until a President *pro tempore* be chosen.

2. He will preserve order and decorum. He may speak to points of order in preference to other members, rising from his seat for that purpose, and shall decide questions of order subject to an appeal to the Council by any member.

3. He shall rise to address the Council, to state facts, but may put questions, or read, sitting.

4. He shall declare all votes; but if a vote be doubted, the President shall, without further debate, require the members voting in the affirmative and negative to rise and stand until they are counted, and he shall declare the result.

5. He may call any member to the chair, but such substitution shall not extend beyond an adjournment, and when out of the chair, the President may express his opinion on any subject under debate, and he shall not resume the chair while the same question is pending.

6. All questions shall be propounded in the order in which they are moved unless the subsequent motion be previous in its nature.

7. After a motion is stated by the President, it shall be disposed of by a vote of the Council, unless the mover withdraw it before a decision or amendment.

8. A motion to adjourn shall always be in order, unless the Council is engaged in voting.

9. The previous question shall be in this form: "Shall the main question be now put?" It shall only be admitted when demanded by a majority of members present, and until it is decided, shall preclude all amendment and further debate of the main question.

The yeas and nays shall be taken on any question upon the request of one-third of the members present.

11. When two or more members happen to rise at the same time, the President shall name the member who shall speak first.

12. Every motion shall be reduced to writing, if the President or any member require it.

13. When a question is under debate, no motion shall be received but to adjourn, to lay on the table, for the previous question, to postpone to a certain day, to commit, to amend, or to postpone indefinitely; which several motions shall have precedence in the order in which they are arranged; and no motion to postpone or commit shall be allowed twice in the same day, in the same stage of the ordinance or proposition, nor, shall a vote on any subsidiary or incidental motion be reconsidered, except a motion to that effect be made and be acted upon at the same meeting at which the vote was decided.

14. When any member is about to speak in debate, or deliver any matter to the Council, he shall rise in his place and respectfully address the presiding officer, confining himself to the question under debate and avoid personality.

15. No member shall be mentioned in debate by his name, but may be described by the place he sits in, or such other designation as may be intelligible and respectful.

16. No member speaking shall be interrupted by another, but by a call to order, or to correct a mistake. If any member, in speaking or otherwise, transgresses the Rules of the Council, the President shall, or any member may, call him to order; in which case the member so called to order shall immediately be seated until the question of order is decided. If the decision be in favor of the member called to order he shall be at liberty to proceed; if otherwise he shall not proceed without the leave of the Council.

17. No member shall speak more than twice to the same question without obtaining leave of the Council.

18. Whilst the President or any member is speaking, none shall stand up or pass unnecessarily before the person speaking.

19. When a question has been decided, any member voting with the majority may move a reconsideration, to be acted upon at the same meeting. Any member voting with the minority may move a reconsideration, to be acted upon at the next meeting; which latter motion shall have priority, if made before the motion first mentioned shall have been decided. No vote or question shall be twice reconsidered.

20. Every member who shall be in the Council when a question is put shall give his vote, unless the Council, for special reasons, excuse him.

21. No motion or proposition, on a subject different from that under consideration, shall be admitted under color of an amendment.

22. All reports may be committed or recommitted at the pleasure of the Council.

23. The division of a question may be called for when the sense will admit of it.

24. When the reading of a paper is called for and objected to, it shall be determined by a vote of the Council.

25. No standing order of the Council shall be suspended, unless two-thirds of the members present consent thereto; nor shall any rule or order be repealed or amended without one day's notice being given of the motion therefor, nor unless a majority of the whole Council concur therein.

26. The order of business shall be as follows:

1. Roll Call.
2. Reading of Records.
3. Papers from the Board of Aldermen.
4. Communications and Reports from city officials.
5. Presentation of petitions, remonstrances and memorials.
6. Reports of Committees.
7. Unfinished business of preceding meetings.
8. Motions, Orders or Resolutions.

The above order of business shall not be departed from, except by vote of a majority of the members present, but the Council may appoint a committee of two to approve the records of the clerk during the year, and if such committee is appointed, the reading of the records shall be omitted, unless called for by one-third of the members present.

27. The seats of the Common Council shall be numbered and determined by lot, and no member shall change his seat but by permission of the President.

28. All committees, except such as the Council determine to select by ballot, shall be appointed by the President, and the political minority shall be represented by at least one member.

29. No member shall be obliged to serve on more than two committees at the same time, or be chairman of more than one.

30. All memorials and other papers addressed to the Council shall be presented by the President, or by a member in his place, who shall explain the subject thereof; and they shall be taken up in the order in which they were presented, unless the Council shall otherwise direct.

31. Standing committees shall be appointed on the following subjects:

ON SECOND READING OF BILLS AND ORDINANCES.

ON ENROLLMENT.

ON ELECTIONS AND RETURNS.

32. No committee shall sit during the sittings of the Council without special leave, except the Committee on the Second Reading of Bills and Ordinances and the Committee on Enrollment.

33. The rules of proceeding in the Council shall be observed in the Committee of the Whole, so far as they are applicable except the rule limiting the time of speaking.

34. When a committee is nominated by the chair, the person first named shall be chairman. In election of committees by ballot when a chairman is not specially chosen, the person having the highest number of votes shall act as chairman; and in case of an equality in votes between two or more members of a committee, the members thereof shall choose a chairman.

35. All committees of the Council shall consist of three members, unless a different number be specially ordered; and no report shall be received from any committee unless agreed to in committee actually assembled; and all reports shall be in writing.

36. It shall be the duty of every committee of the Council to whom any subject may be specially referred, to report thereon within five weeks, or ask for further time.

37. Members of the Council may attend meetings of any of its committees, but shall not vote thereat.

38. All ordinances and resolutions shall have two several readings before they shall be finally passed by this Council. See Joint Rules 7 and 8.

39. All ordinances after being read a second time shall be referred to the Committee on the Second Reading of Bills and Ordinances, and after being reported upon by said committee, shall be again read, after which the question shall be on passing the same to be enrolled.

40. No ordinance or resolution imposing penalties, or authorizing the expenditure of money, shall have more than one reading the same day.

41. Any member offering a resolution shall write his name on the bottom of the back of such resolution.

42. All salary officers shall be chosen by written or printed ballots; and in the election of any officers by ballot, blanks shall be reported but not counted as votes.

43. The clerk shall keep brief minutes of the votes and proceedings of the Council, entering thereon all accepted resolutions; shall notice reports and memorials, and other papers submitted to the board, only by their titles or a brief description of their purport.

44. The Clerk of the Common Council shall keep the record of committees who may require that service; and on the appointment of every standing committee, a book for records shall be provided by its chairman, or by said clerk. The clerk shall have the custody of minutes by him kept; and the records of the several committees shall be open to the inspection of the members of the City Council.

45. With the exception of any order for a joint convention, any joint order originating in the Common Council shall be copied, and shall, previous to the hour for calling the meeting to order, be posted in some prominent place in the Council Chamber, where it may be open to the inspection of the members.

46 "Cushing's Manual" shall be the authority on all questions of debate or parliamentary usage, when the same does not conflict with the Rules and Orders of the Common Council.

CITY GOVERNMENT FOR 1899.

MAYOR

JEREMIAH CROWLEY.....52 Mt. Washington street

ALDERMEN

CHARLES A. R. DIMON..Chairman

SAM CHAPIN.....198 Mammoth Road

LUCIUS A. DERBY.....148 First street

CHARLES A. R. DIMON.....223 Park View avenue

OLIVER A. LIBBY.....399 Stevens street

PHILIP McNULTY.....9 Lyon street

JAMES F. MISKELLA.....35 Mead street

EDWARD B. PEIRCE.....17 Belmont street

GEORGE H. TAYLOR.....29 Twelfth street

OLIVER D. WILDER.....6 Coral street

GIRARD P. DADMAN.....Clerk

COMMON COUNCILMEN

Ward One

HERBERT R. BAKER.....24 West Third street

CHARLES D. PAIGE.....60 Thorndike street

FRANCIS E. SAUNDERS.....119 Middlesex street

Ward Two

PATRICK H. BARRY.....	3	Lagrange street
FRANK McMAHON.....	165	Worthen street
JOHN J. MULLANEY.....	160	Colburn street

Ward Three

WILLIAM H. BROWN.....	290	Westford street
CHARES H. FLANDERS.....	8	Osgood street
BURTON H. WIGGIN.....	91	Willie street

Ward Four

TIMOTHY F. DONOHOE.....	43	Whipple street
MICHAEL J. MARKHAM.....	23	Davis street
JOHN J. ROARK.....	28	Lvon street

Ward Five

FRANK S. CLARK.....	60	Chapel street
JOHN F. DILLON.....	323	Concord street
JOHN J. O'BRIEN.....	111	High street

Ward Six

WILLIAM E. BADGER.....	156	Methuen street
GEORGE E. BURNS.....	25	Eighteenth street
JAMES F. WALKER.....	43	Seventh street

Ward Seven

PHILIP DESMARAIS.....	63	Bowers street
LEWIS LEBRUN.....	467	Moody street
EBEN B. STAFFORD.....	301	Mammoth road

Ward Eight

FRED E. BEAN.....	14	Windsor street
RALPH B. LYMAN.....	107	Stevens street
ANTHONY D. MITTEN.....	43	A street

Ward Nine

HENRY HATCH.....	65	Fay street
WALTER E. MURKLAND.....	313	High street
WILLIAM D. WHITTET.....	31	Wentworth avenue
CHARLES D. PAIGE.....		President
FRANK M. DOWLING.....		Clerk

MEETINGS OF THE CITY COUNCIL

The regular meetings of both branches of the City Council are held at the City Hall as follows:—

January	10 and 24	July	11 and 25
February	14 and 23	September	12 and 26
March	14 and 28	October	10 and 24
April	11 and 25	November	14 and 28
May	9 and 23	December	12 and 26
June	13 and 27		

At 8 P. M.

JOINT STANDING COMMITTEES OF THE CITY COUNCIL.

APPROPRIATIONS—Aldermen Dimon, Taylor and Libby; Councilmen Saunders, Whittet, Paige and Clark.

ACCOUNTS—Aldermen Derby; Councilmen Saunders and Walker.

FINANCE—The Mayor and Alderman Miskella; Councilmen Badger, Murkland and Clark.

CLAIMS—Aldermen McNulty and Taylor; Councilmen Baker, Burns and Donohoe.

COMMONS—Aldermen Libby and Wilder; Councilmen Mitten, Wiggin and Dillon.

FIRE DEPARTMENT—Aldermen Dimon and Derby; Councilmen Bean, Baker and Markham.

LANDS AND BUILDINGS—Aldermen Miskella and Wilder; Councilmen Stafford, Whittet and Mullaney.

MILITARY AFFAIRS—Aldermen McNulty and Chapin; Councilmen Mitten, Flanders and Donohoe.

ORDINANCES AND LEGISLATION—Aldermen Libby and Taylor; Councilmen Walker, Bean and Barry.

PRINTING—Aldermen Derby and Libby; Councilmen Brown, Wiggin and Roark.

STREETS—Aldermen Peirce and Chapin; Councilmen Hatch, Burns, Lyman, Lebrun and Barry.

EDUCATION—Aldermen Taylor and Miskella; Councilmen Stafford, Whittet and Mullaney.

STANDING COMMITTEES OF THE BOARD OF ALDERMEN.

SEWERS—Aldermen Dimon, Wilder and McNulty.

STATE AID—Aldermen McNulty and Wilder.

LIGHTING STREETS—Aldermen Taylor and Libby.

BILLS IN SECOND READING—Aldermen Libby and Wilder.

ELECTRIC WIRES—Aldermen Wilder, McNulty and Chapin.

ENROLLMENT—Aldermen Wilder and Libby.

LICENSES—Aldermen Miskella, Taylor and Peirce.

WEIGHTS AND MEASURES—Aldermen Taylor and Dimon.

STANDING COMMITTEES OF COMMON COUNCIL.

BILLS IN SECOND READING—Councilmen Brown, Badger and O'Brien.

ELECTIONS AND RETURNS—Councilmen Stafford, McMahon and O'Brien.

ENROLLMENT—Councilmen Lyman, Hatch and Desmarais.

SPECIAL COMMITTEES.

Board of Aldermen.

CLERK'S RECORD—Aldermen Chapin and Miskella.

City Council.

RECORDS OF SOLDIERS AND SAILORS—Aldermen Dimon and Wilder; Councilmen Mitten, Hatch and Markham.

RELATING TO DISPOSAL OF GARBAGE—Aldermen Derby and Miskella; Councilmen Flanders, Bean and Roark.

CITY OFFICERS FOR 1899.

CITY CLERK

GIRARD P. DADMANOffice, City Hall

Chosen by the City Council in convention in January. Term expires first Monday in January, or until successor is chosen. City Charter, Sect. 17.

CITY TREASURER AND COLLECTOR OF TAXES

CHARLES F. COBURN.....Office, City Hall

Chosen by the City Council in convention in January for one year from first day of April, or until successor is chosen. City Charter, Sect. 17, Ord., Chap. 9.

AUDITOR OF ACCOUNTS

DAVID CHASE.....Office, City Hall

Chosen by concurrent vote in January or February for one year from first day of April, or until successor is chosen. Ord., Chap. 2, Sect. 1.

SUPERINTENDENT OF STREETS

CLEVELAND J. CHENEY.....Office, City Hall

Chosen by concurrent vote in January or February, term expires first Monday in January, or until successor is chosen. Ord., Chap. 39, Sect. 1.

CHIEF OF THE DEPARTMENT OF SUPPLIES

ANDREW E. BARRETT.....Office, City Hall

Chosen at annual city election. Sect. 3, Chap. 415, Acts of 1896.

SURVEYORS OF HIGHWAYS

CLEVELAND J. CHENEY

GEORGE L. HOOPER

Chosen by concurrent vote in January or February. City Charter, Sect. 17, Ord., Chap. 39, Sect. 1.

CIVIL ENGINEER FOR THE CITY

GEORGE BOWERS..... Office, City Hall

Chosen by concurrent vote in January or February for one year from first day of April or until successor is chosen. Ord., Chap. 13, Sect. 1.

CITY SOLICITOR

FRANCIS W. QUA..... Office, City Hall

Chosen by concurrent vote in January or February for one year from first day of March, or until successor is chosen. Ord., Chap. 11, Sect. 1.

CITY MESSENGER

FRANCIS M. FAGAN..... Office, City Hall

Chosen by concurrent vote in January for one year from first Monday in February, or until successor is chosen. Ord., Chap. 10, Sect. 1.

LIBRARAIN OF THE CITY LIBRARY

FREDERICK A. CHASE..... Office at City Library

Chosen by the Board of Trustees of the City Library. Chap. 231, Sect. 5, Acts 1888.

TRUSTEES OF THE CITY LIBRARY

JEREMIAH CROWLEY, Chairman, Ex-Officio	Mayor
THOMAS WALSH.....	Term Expires 1900
STEPHEN J. JOHNSON.....	“ “ 1901
PHILIP J. FARLEY.....	“ “ 1902
FRANK P. PUTNAM.....	“ “ 1903
GEORGE F. RICHARDSON, Vice Chairman.....	“ “ 1904

FREDERICK A. CHASE.....Clerk

Appointed by the Mayor in December for term of five years commencing the second Monday in January or until successor is appointed.
Regular meeting last Tuesday in each month.

SUPERINTENDENT OF PUBLIC BUILDINGS

JOSEPH S. GILLOWOffice, City Hall

Chosen by concurrent vote in January or February. Term expires first Monday in January or until successor is chosen. Ord., Chap. 5, Sect. 1.

CITY PHYSICIAN

WILLIAM M. JONES, M. D.....Office, Board of Health

Appointed by the Mayor and Alderman in January, for three years.

TRUSTEES PUBLIC BURIAL GROUNDS

JEREMIAH CROWLEY, Chairman, Ex-OfficioMayor

WILLIAM H. PENN, CHARLES N. BAGLEY, Sec.

One member appointed by Mayor and Aldermen annually in December, for two years from first day of January next ensuing, or until successor is appointed. Acts 1891, Chap. 337.

SUPERINTENDENT OF BURIALS

FREDERICK A. BATES.....Office, Board of Health

Chosen by concurrent vote in January or February. Ord., Chap. 4, Sect. 1.

ASSESSORS OF TAXES

C. ARTHUR ABBOTT.....Term Expires 1900

JOHN P. MAHONEY....." " 1901

ABEL WHEELER....." " 1902

ABEL WHEELER.....Chairman

JOHN P. MAHONEY.....Secretary

STEPHEN J. KIRBY.....Clerk

One member chosen by concurrent vote annually in January or February, for the term of three years from first Monday in January of the year in which he is chosen, or until successor is chosen. Ord., Chap. 3, Sect. 1.

INSPECTOR OF WIRES

JAMES F. McELHOLM.

Appointed by Mayor and Aldermen. Ord., 1898.

OVERSEERS OF THE POOR.

JAMES McKINLEY.....Chairman

WARD 1—SAMUEL HOLGATE, 46 Bowditch St.	Term Expires	1899
“ 2—THOMAS MAHONEY, 137 Colburn St.....	“ “	1899
“ 3—HORACE ELA, 407 Walker St.....	“ “	1899
“ 4—JAMES E. GORMAN, 384 Gorham St.....	“ “	1899
“ 5—JEREMIAH McGLINCHY, 438 Central St..	“ “	1900
“ 6—AMOS B. LEIGHTON, 949 Bridge St.....	“ “	1900
“ 7—JAMES McKINLEY, 24 West Meadow Rd..	“ “	1899
“ 8—HENRY J. WILLIAMS, 354 Pine St.....	“ “	1900
“ 9—HERBERT V. HUNT, 116 Fort Hill Ave..	“ “	1900

Regular meetings last Thursday of the month at the City Farm.

Secretary and Superintendent of Out-Door Poor

MARTIN J. COURTNEY, 26 Ames Street.....Office, City Hall

HOURS: 9 A. M. to 4 P. M.

Superintendent of In-Door Poor

MOSES WYMANOffice and Residence, City Farm

List of Committees

ACCOUNTS—Hunt, Gorman, Williams.

AGRICULTURE, CATTLE AND SWINE—Ela, Holgate, Leighton.

CARE AND REPAIR BUILDINGS—Leighton, Gorman, McKinley.

CLOTHING, FURNITURE AND BEDDING—McGlinchey, Ela, Hunt.

DISPENSARY—McKinley, Mahoney, Holgate.

PRINTING—Williams, McGlinchey, Leighton.

OUT-DOOR RELIEF—Gorman, Williams, Mahoney.

PROVISIONS AND SUPPLIES—McKinley, Ela, Mahoney.

WOOD YARD—Hunt, Gorman, Holgate.

INSURANCE—Leighton, McGlinchey, Holgate.

District and Dispensary Physicians

DISTRICT 1—	L. J. McDONOUGH.....	296 Market Street
"	2—A. J. HALPIN.....	26 Central Street
"	3—C. BRET POOLE.....	40 Middlesex Street
"	4—OMER P. PORTER.....	253 Central Street
"	5—W. A. JOHNSON.....	160 Merrimack Street
"	6—PIERRE BRUNELLE, JR.....	19 Austin Street

City Dispensary.

OFFICE, CITY HALL.

AUSTIN KEITH, Clerk

Open week days—9 A. M. to 5 P. M.

MEMBERS OF THE LOWELL WATER BOARD.

OFFICE, CITY HALL.

FRANK L. WEAVERPresident

STEPHEN H. JONES.....	Term Expires	1899
FRANK L. WEAVER.....	" "	1900
MICHAEL J. DOWD.....	" "	1901
AUGUST FELS.....	" "	1902

JOHN W. CRAWFORD, Clerk

ROBERT J. THOMAS, Superintendent

The members of the Lowell Water Board are chosen by concurrent vote in January or February for a term of four years from the first Monday of March following their election, one member retiring annually.

The Superintendent is chosen in March by the Board.

The clerk is chosen by the Board in June. Ord., Chap. 45.

COMMISSIONERS OF SINKING FUNDS

FRED A. BUTTRICK.....	Term Expires	1900
CHARLES L. KNAPP.....	" "	1901
AUSTIN K. CHADWICK.....	" "	1902

CHARLES F. COBURN, Secretary and Treasurer

One member of the Commissioners is elected annually by the City Council for three years, under the provisions of Chap. 29 of the Public Statutes, Sect. 10.

BOARD OF CIVIL SERVICE EXAMINERS

JOSEPH SMITH.....Chairman

JOHN J. COLTON, M. D., CHARLES H. CONANT, JOSEPH SMITH.

CHARLES H. CONANT, Secretary

Appointed by the State Civil Service Commissioners.

SUPERINTENDENT OF STATE AID

HUBERT M. POTTER.

MARY C. BRENNAN, Asst. Supt.

Appointed by Mayor and Aldermen, Ord. 1898.

FIRE DEPARTMENT

The Chief Engineer is elected by concurrent vote in the month of March or April, for the term of three years after the first day of May next succeeding. Sect. 2, Chap. 95, Acts of 1897.

Chief Engineer

EDWARD S. HOSMER.....202 Westford Street

Office, Engine House, Middle Street.

Assistant Engineers

JAMES F. NORTON, First Assistant22 Ames Street

GEORGE F. SALMON.....91 Mt. Washington Street

EDWARD MELOY.....30 Fort Hill Avenue

HENRY W. BURTON.....15 Kimball Avenue

JAMES F. NORTON, Clerk of the Board

The Clerk is chosen by the Engineers.

Operator of the Fire Alarm Telegraph

HENRY C. FERNALD.....Central Station

Committee on Fire Department

Aldermen DIMON and DERBY; Councilmen BEAN, BAKER and

MARKHAM

THE BOARD OF POLICE OF THE CITY OF LOWELL

JOHN A. FAULKNER, Chairman

JOHN A. FAULKNER.....	Term expires 1900
PETER J. BRADY.....	“ “ 1902
HARRY R. RICE.....	“ “ 1904

JOSEPH SMITH, Clerk

Appointed by the Mayor under the provisions of Chap. 428 of the Acts of 1894 and Chap. 187 of the Acts of 1895.

Police Roll, 1897

GEORGE R. DAVIS, Superintendent of Police.....	35 Huntington street
WILLIAM B. MOFFATT, Deputy Superintendent.....	45 London street
WILLIAM R. KEW, Captain.....	17 Princeton street
JAMES BROSNAN, Lieutenant.....	194 Perry street
GEORGE B. PALMER, Lieutenant.....	23 Eighteenth street
JAMES E. WEBSTER, Lieutenant.....	273 Westford street
THOMAS E. ALLEN, Inspector, Criminal.....	32 West street
CHARLES LAFLAMME, Inspector, Criminal.....	43 Second avenue
DAVID J. DONALDSON, Inspector, Liquor.....	204 Wentworth avenue
FRANK GOODWIN, Inspector, Liquor.....	17 Coral street
MICHAEL E. McDONALD, Inspector of Claims.....	13 Shedd street
MARTIN CONNERS, Sergeant.....	282 Concord street
HUGH DOWNEY, Sergeant.....	183 Pleasant street
WILLIAM G. BUMPS, Court Officer.....	256 Gibson street
HENRY FARRINGTON, Court Officer.....	5 Coral street
ISAAC L. LIBBY, Court Officer.....	11 Coral street
ALFRED M. HOLMAN, Keeper.....	126 Powell street
JAMES A. McQUADE, Keeper.....	227 Concord street
MICHAEL J. BURNS, Electrician.....	24 Fulton street
JAMES H. HOWARD, Operator.....	880 Gorham street
CHESTER E. RYDER, Patrol Guard.....	855 Lawrence street
JOHN HICKSON, Patrol Guard.....	60 Mammoth road
FREDERICK L. DAVIS, Driver of Patrol.....	Police Station
JAMES W. KILBURN, Driver of Patrol.....	92 Shaw street
ALBERT CROWELL, Foreman.....	378 Rogers street
MARGARET WALLACE, Matron.....	Police Station

Patrolmen

ABBOTT, GEORGE S.....	5	Ready avenue
ATKINSON, THOMAS R.....	21	1-2 Loring street
BLOOD, JOSIAH S.....	184	A street
BOYLE, JAMES.....	34	May street
BREAULT, ELOI N.....		Moody street, no number.
BREEN, DENNIS J.....	768	Moody street
BUCHANAN, JOHN.....	106	Beech street
BURNETT, WILLIAM C.....		West Sixth street
CAWLEY, PETER.....	872	Bridge street
CLEMENT, HORACE W.....	26	Eighteenth street
COGGER, DANIEL W.....		Moody street, no number
COLEMAN, THOMAS F.....	736	Central street
CONWAY, JOHN E.....	16	Linden street
CORCORAN, PETER T.....	336	High street
CREAHIN, JOHN.....	441	Pine street
CROWLEY, JOHN B.....	112	Walker street
CROWLEY, JOHN J.....	107	Blossom street
CURRAN, PETER.....	37	Durant street
DENNETT, JOHN S.....	55	Read street
DOW, JAMES E.....		50 C street
DUNCAN, ALEXANDER.....	16	Court street
DUNLAVEY, JAMES.....	11	Butterfield street
DWYER, PHILIP.....	262	Concord street
FITZGERALD, THOMAS H.....	215	Manchester street
FOX, EDWARD.....		Lawrence, cor. Moore street
FOX, FRANK.....	20	Chambers street
FOX, JOHN W.....	598	Bridge street
FRAWLEY, PATRICK J.....	34	Burns street
FREEMAN, JOHN.....	491	Gorham street
GANLEY, JOHN J.....	81	Boynton street
GIROUX, WILLIAM.....	37	Second avenue
GRADY, WILLIAM H.....	39	Lundberg street
GREGG, CHARLES.....	96	Fort Hill avenue
GRINNELL, ENOCH L.....	110	Appleton street
HEALEY, JOHN F.....	30	Fulton street
HILL, CHARLES S.....	29	Fifth street
HILL, EDWARD E.....	308	High street
HOGAN, DAVID H.....	82	Varney street

HOLLAND, JAMES E.....	34	Second avenue
HOWARD, CORNELIUS.....	29	Andrews street
HURLEY, JAMES F.....	778	Moody street
INGALLS, LINDSEY E.....	110	Beech street
JONES, WILLIAM B.....	221	Branch street
KANE, BARTHOLOMEW.....	88	Agawam street
KIERNAN, MICHAEL.....	9	State street
LANE, DANIEL W.....	16	Smith avenue
LEIGHTON, EURIC L.....	90	Ford street
LEIGHTON, JOHN L.....	78	South Loring street
LENNON, MICHAEL J.....	10	Pleasant street
LIBBY, ALBERT E.....	61	Eighteenth street
LIBBY, ISAAC L.....	11	Coral street
LYNCH, JEREMIAH.....	79	Andrews street
MACKENZIE, JOHN R.....	124	First street
MAGUIRE, HUGH.....	178	Perry street
MAHER, MARTIN A.....	92	Twelfth street
MARKHAM, JAMES.....	12	Burns street
MARSHALL, FRANK K.....	57	Claire street
MARSHALL, GEORGE W.....	485	Parker street
McCANN, MATTHEW J.....	186	Pleasant street
McCLOUGHRY, THOMAS.....	66	West Fourth street
McINTEE, CORMACK.....	109	Jewett street
McKAY, JOHN H.....	138	Bartlett street
McNABB, JAMES.....	9	West Meadow road
MOLONEY, THOMAS A.....	44	Whipple street
MOORE, FRANCIS E.....	545	Middlesex street
MULRY, JOHN J.....	71	Bowers street
MURPHY, ANTHONY.....	191	Concord street
NEELY, D. WESLEY.....	27	Osgood street
NOYE, JOSE V. M.....	64	Worthen street
O'BRIEN, WILLIAM H.....	13	June street
O'CONNELL, JOHN.....	190	Perry street
O'CONNELL, MICHAEL.....	36	Linden street
PAGE, ALONZO J.....	410	Westford street
PERKINS, EVERETT E.....	18	Leroy street
PROVENCHER, NAPOLEON.....	39	Fourth avenue
QUINN, HENRY F.....	45	Durant street
RILEY, JAMES.....	150	Pleasant street
ROBINSON, GEORGE W.....	5	Wachusett street

RYAN, BARTHOLOMEW.....	42 Sydney street
SANBORN, THOMAS J.....	126 Grove street
SPARKS, JOHN F.....	Beacon, cor. Twelfth street
SWAN, EDWARD T.....	42 Blossom street
TILTON, HERMAN N.....	57 South Walker street
TILTON, JOHN W.....	12 Whipple street
WALSH, JOHN A.....	53 Third avenue
WELCH, JOHN N.....	511 Lawrence street
WELCH, REDMUND, Jr.	42 North street
WHITNEY, FRANK H.....	108 D street
WHITTAKER, JOHN T.....	63 Congress street
WHITWORTH, JAMES H.....	1 Billerica street
WILSON, WILLIAM H.....	503 Fletcher street
YOUNG, GEORGE H.....	12 Colburn street

Keeper of Lock-up

GEORGE R. DAVIS

Constables

ADAMS, THOMAS E.	HARRIS, SIMON B.
ALLEN, THOMAS E.	HICKSON, JOHN
BALLOU, GEORGE W.	LAFLAMME, CHARLES
BRADLEY, CHARLES F.	LAPIERRE, JOSEPH S.
BROSNAN, JAMES	MAGUIRE, JOHN E.
BUMPS, WILLIAM G.	MANSUR, EZRA E.
CONNORS, MARTIN	MERCIER, HENRY
DAVIS, GEORGE R.	McMANUS, JOHN
DONALDSON, DAVID J.	MOFFATT, WILLIAM B.
DOWNEY, HUGH	NOYES, EDWARD J.
FARRINGTON, HENRY	PALMER, GEORGE B.
FLYNN, JOHN H.	PRINCE, HENRY K.
FLYNN, RICHARD J.	SEARLE, JOHN P.
GATELY, BERNARD F.	TUTTLE, WOODBRIDGE W.
GERRISH, ENOCH	WEBSTER, JAMES E.
GOODWIN, FRANK	WORCESTER, CHARLES H.

Police Court

SAMUEL P. HADLEY.....	Standing Justice
JOHN J. PICKMAN	Special Justice
FREDERICK A. FISHER.....	Special Justice
JAMES F. SAVAGE.....	Clerk
EDWARD W. TRULL.....	Assistant Clerk

HEALTH COMMISSIONER

GEORGE R. DAVISOffice, Police Station

Chosen by concurrent vote by nomination commencing in the Board of Aldermen, in January or February. Ord., Chap. 29, Sect. 2.

BOARD OF HEALTH

EDMUND H. PACKER, M. D., Chairman.

GEORGE W. FIFIELD

THOMAS J. MULLIGAN

Appointed by the Mayor and Board of Aldermen in January. Chap. 332, Sect. 1 Acts of 1895.

BOARD OF REGISTRARS OF VOTERS

JOHN P. FARLEY.....Term Expires May 1, 1900

JAMES F. OWENS.....“ “ “ 1901

EDWARDS CHENEY.....“ “ “ 1902

GIRARD P. DADMAN, City Clerk, Ex-Officio

Chapter 417, Acts of 1893, Sect. 26.

One member appointed annually in March or April for three years from first day of May next ensuing and until his successor is appointed and qualified.

FENCE VIEWER

JOSHUA M. HADLEY

Chosen by concurrent vote by nomination commencing in the Board of Aldermen in January or February. Ord., Chap. 41, Sect. 1.

FIELD DRIVERS

MARTIN CONNORS

JAMES BROSNAN

JAMES E. WEBSTER

HUGH DOWNEY

Chosen by concurrent vote commencing in the Board of Aldermen in January or February. Ord., Chap. 41, Sect. 1.

POUND KEEPER

LAWRENCE J. THYNE

Chosen by concurrent vote by nomination commencing in the Board of Aldermen in January or February. Ord., Chap. 41, Sect. 1.

SEALER OF WEIGHTS AND MEASURES**JAMES R. FULTON**

Appointed by the Board of Aldermen by nomination in March or April. Pub. Stat., Chap. 65, Sect. 8; Acts of 1882, Chap. 42. Ord., Chap. 41, Sect. 2.

INSPECTOR OF MILK, VINEGAR AND OLEOMARGARINE**THOMAS O. ALLEN**.....Office, City Hall

Appointed by the Board of Aldermen by nomination in January or February. Ord. Chap. 41, Sect. 2.

INSPECTOR OF ANIMALS AND PROVISIONS**WALTER A. SHERMAN**.....Office, 340 Central Street

Appointed by the Mayor and Aldermen annually in March. Acts of 1894, Chap. 491, Sect. 1.

INSPECTORS OF PETROLEUM OILS**THOMAS O. ALLEN****EDWARD S. HOSMER**

Appointed by the Mayor and Aldermen. Pub. Stat., Chap. 59, Sect. 6.

INSPECTORS OF BOILERS**RICHARD DOBBINS****BARTHOLOMEW SCANNELL**

Pub. Stat., Chap. 102, Sect. 49.

FISH WARDEN**GEORGE SPENCE**

Appointed by the Mayor and Board of Aldermen. Pub. Stat., Chap. 91, Sect. 42.

**MEASURER OF WOOD AND BARK AT CITY SCALES—
INSPECTOR OF BALED OR BUNDLED HAY****GEORGE F. NOONAN**.....Office at City Scales, rear Market House Building.

Appointed by the Board of Aldermen in January or February. Ord., Chap. 46, Sect. 1; Chap. 21, Sect. 1.

MEASURERS OF WOOD AND BARK BROUGHT BY WATER OR RAILROAD CARS INTO THE CITY

ALLEN, MELANCTHON M.

BATEMAN, JOHN F.

CHOATE, JAMES F.

GATES, HENRY K.

KENNEDY, THOMAS J.

GILMORE, ROBERT J.

GORMLEY, HARRIET E.

MILLS, LEWIS E.

PARKER, HARRY J.

Appointed by the Board of Aldermen in January or February. Ord., Chap. 46, Sect. 1.

MEASURERS OF WOOD AND BARK

CHOATE, JAMES F.

COBURN, CLARENCE G.

DODGE, ALLEN

GATES, HENRY K.

GILMORE, ROBERT J.

GORMLEY, HARRIET E.

KENNEDY, THOMAS J.

MILLS, LEWIS E.

McMASTER, SAMUEL R.

PARKER, HARRY J.

STANLEY, HARRY L.

WILLIAMS, HENRY J.

Appointed by the Board of Aldermen in January or February. Ord., Chap. 46, Sect. 1.

MEASURERS OF GRAIN

CHOATE, JAMES F.

DUSTIN, MABEL J.

MILLS, LEWIS E.

MOULTON, JAMES W.

PARKER, HARRY J.

PARKER, FRANK H.

WILLIAMS, HENRY J.

Fees.—2½ mills a bushel for measuring. Appointed by the Board of Aldermen in January or February. Ord., Chap. 41, Sect. 2.

SURVEYORS OF LUMBER

ALLEN, MELANCTHON M.

BATEMAN, JOHN F.

CHARETTE, TELESOPHORE

CHOATE, JAMES F.

DODGE, ALLEN

EVERETT, LOUDON

FARLEY, GUILFORD D.

FLEMING, GEORGE A.

GILMAN, ALBERT I.

HARRINGTON, DANIEL

LEAVITT, GEORGE E.

McDONALD, MURDOCK B.

McLEAN, JOHN R.

McLEOD, MURDOCK R.

McMASTER, SAMUEL R.

MILLS, LEWIS E.

MOULTON, IVORY F.

NEALE, AUSTIN J.

NOYCE, CHARLES H.

PARKER, HARRY J.

PRATT, MURRAY H.

ROBINSON, JOHN W.

SMITH, WALTER

STOCKMAN, EDWARD

WALSH, PATRICK

WOODWORTH, HENRY P.

Chosen by concurrent vote by nomination commencing in the Board of Aldermen in January or February. Ord., Chap. 41, Sect. 1.

SURVEYORS OF PLASTERING, BRICK, STONE WORK OR PAINTING

BATEMAN, JOHN F.
BROOKS, HENRY O.
FAVOR, WILLIAM A.

LYFORD, ALFRED E.
SNELL, ORA M.
SMITH, MELVIN B.

Appointed by the Board of Aldermen in January or February. Ord., Chap. 41 Sect. 2.

WEIGHERS OF HAY AND OTHER ARTICLES

BEALS, LAFOREST
BROWN, F. L.
CHOATE, JAMES F.
CLIFFORD, ARTHUR I.
COBURN, CLARENCE G.
DONOHUE, THOMAS
DUSTIN, MABEL J.
GATES, HENRY K.
GOGGIN, ANDREW
GORMLEY, HARRIET E.

HARTWELL, GEORGE W.
KENNEDY, THOMAS J.
KEW, JOHN J.
MAGUIRE, MICHAEL
MILLS, LEWIS E.
MOULTON, JAMES W.
McMASTER, SAMUEL R.
PARKER, HARRY J.
PARKER, FRANK H.
WILSON, FRANKLIN T.

WEIGHERS OF COAL

BARTLETT, D. B. H.
BEALS, LAFOREST
BROTHERS, FANNIE E.
BROWN, F. L.
BURNS, GEORGE E.
CAWLEY, EDWARD
CHOATE, JAMES F.
CLIFFORD, ARTHUR I.
DONOHUE, THOMAS
DREWETT, EDWARD
DUSTIN, MABEL J.
FARNHAM, GEORGE W.
FROST, CHARLES T.
GALLAGHER, FELIX
GATES, HENRY K.
GOGGIN, ANDREW
GORDON, JOHN G.
GORMLEY, HARRIET E.

HAMLETT, ADELAIDE
JOHNSON, THOMAS J.
KENNEDY, THOMAS J.
KITCHEN, C. B.
LIVINGSTON, WILLIAM
MAGUIRE, MICHAEL
McMASTER, SAMUEL R.
MILLS, LEWIS E.
PARKER, HARRY J.
PARKER, FRANK H.
QUINN, JOHN P.
SEXTON, CORNELIUS
STANLEY, HARRY L.
SULLIVAN, JAMES A.
WHITE, HERBERT R.
WILLIS, SAMUEL R. W.
WILSON, ERWIN A.
WILSON, FRANKLIN T.

SCHOOL COMMITTEE, 1899.

ANDREW G. SWAPP.....President
 ARTHUR K. WHITCOMB.....Secretary

Members

Ward 1—AZRO H. SCHOOLCRAFT..... 123 Prince Street.	Term Expires 1899
Ward 2—THOMAS J. MURPHY..... 91 Dummer Street.	“ “ 1899
Ward 3—CHAS. L. SWEETSIR, M. D..... Telephone 682-5. 276 Westford Street.	“ “ 1900
Ward 4—JAMES E. DONNELLY..... Telephone 531-2. 36 Floyd Street.	“ “ 1899
Ward 5—DENNIS J. MURPHY..... 53 Central Street.	“ “ 1900
Ward 6—FRANK K. STEARNS..... Telephone 478-2. 256 Lawrence Street.	“ “ 1900
Ward 7—ANDREW G. SWAPP..... Telephone 330. 307 Pawtucket Street.	“ “ 1899
Ward 8—WILLARD EVERETT..... 12 Belmont Street.	“ “ 1900
Ward 9—ALBERT G. THOMPSON..... Telephone 434. Lowell Post Office.	“ “ 1899

Standing Committees

1. ON TEACHERS—Messrs. Swapp, Everett and Donnelly.
2. ON BOOKS AND SUPPLIES—Messrs. Stearns, Schoolcraft, Sweet-sir, D. J. Murphy and T. J. Murphy.
3. ON EVENING SCHOOLS—Messrs. Everett, Swapp, Schoolcraft, Stearns and T. J. Murphy.
4. ON HIGH SCHOOL—Messrs. Thompson, Everett, Swapp, Donnelly and D. J. Murphy.
5. ON PENMANSHIP AND DRAWING—Messrs Schoolcraft, Sweetsir and T. J. Murphy.
- 6—ON MUSIC—Messrs. Stearns, Thompson and Donnelly.
7. ON REPORTS AND PRINTING—Messrs. Thompson, Schoolcraft, and D. J. Murphy.
8. ON ACCOUNTS—Messrs. Donnelly, Stearns and Sweetsir.
9. ON SCHOOL HOUSES AND HYGIENE—Messrs. Sweetsir, Swapp and D. J. Murphy.
10. ON RULES—Messrs. T. J. Murphy, Thompson and Everett.

Assignment of Schools

- MR. SCHOOLCRAFT, Ward 1—Edson, Eliot Street, Kirk Street and Cottage street.
- MR. T. J. MURPHY, Ward 2—Green, Worthen Street, Chever Street Morrill and Worthen Street Kindergarten.
- MR. SWEETSIR, M. D., Ward 3—Lincoln, Howard Street, Grand Street, Plain Street and Lincoln Kindergarten.
- MR. DONNELLY, Ward 4—High, Butler, London Street, Weed Street, Agawam Street, Carter Street, Lyon Street, Agawam Street and Chapel Street Kindergartens.
- MR. D. J. MURPHY, Ward 5—High, Charles Street, Central Street, Ames Street and Fayette Street.
- MR. STEARNS, Ward 6—Varnum, West Sixth Street, Tenth Street, Lakeview Avenue, Billings Street and Varnum Kindergarten.
- MR. SWAPP, Ward 7—High, Bartlett, Pawtucket, Training, Cross Street, Cabot Street, New Moody Street, Lexington Avenue, Pawtucketville, Training and Bartlett Kindergartens.
- MR. EVERETT, Ward 8—High, Highland, Franklin, Dover Street, Powell Street, Pine Street, Middlesex Village, Franklin, Dover and Pine Street Kindergartens.
- MR. THOMPSON, Ward 9—High, Moody, Pond Street, High Street Sycamore Street and Moody Kindergarten.

Evening Schools

MR. EVERETT—High and Mann.

MR. SWAPP—Bartlett, Green and Pawtucket.

MR. STEARNS—Varnum and Aiken Avenue.

MR. SCHOOLCRAFT—Edson, Colburn and Manual Training.

MR. MURPHY—Butler and Franklin.

Superintendent of Public Schools

ARTHUR K. WHITCOMB.....Office in City Hall

OFFICE HOURS—One hour after the forenoon session of the schools; and from 2 to 3 o'clock Saturday afternoon.

Telephone 566-4.

Truant Commissioners

G. F. STURTEVANT

WILLIAM F. THORNTON

JAMES KELLEY

CAMILLE ROUSSIN

Office in City Hall.

OFFICE HOURS—Saturday, 2 to 3 o'clock P. M. Other days, 4 to 5 o'clock P. M., except during the summer vacation, when the office will be open from 9 to 10 o'clock A. M.

Regular Meetings of the School Committee

January	30	July.....	31
February.....	27	August	28
March ...	27	September	25
April	24	October.....	30
May.....	29	November	27
June.....	26	December	25

CHARTER AMENDMENTS, ACTS OF 1896.

CHAP. 415.

AN ACT TO AMEND THE CHARTER OF THE CITY OF LOWELL.

Be it enacted, etc., as follows :

SECTION 1. All executive powers which are now by law vested in the city council of the city of Lowell, or either branch thereof, shall hereafter be vested in and exercised by the Mayor of said city, except as hereinafter otherwise provided.

SECT. 2. The Mayor may suspend or remove any executive or administrative officer, except as hereinafter provided, for such cause as he shall deem sufficient, and shall set forth in the order of suspension or removal his reasons therefor, provided that no removal shall be made upon partisan grounds. The order of suspension or removal shall not take effect until it is approved by the city council voting by yeas and nays. The city council may by a two-thirds vote in each branch, voting by yeas and nays, remove any of said officers without the consent of the mayor; *provided, however*, that nothing contained in this section shall apply to any of the following departments, namely:—The school committee, the police commission, the water board, the overseers of the poor, or the trustees of the public library.

SECT 3. There shall be a department of supplies, and all material and supplies for the city shall be purchased by the chief or head of such department, subject to the approval of the mayor. So far as is practicable purchases shall be after public advertisement and under contract approved by the mayor. All bills for materials and supplies shall show the date of purchase, date of delivery, the unit of price, the quality and quantity of articles purchased and received, the number and date of the order for purchase, and if the purchase is under contract, the number and date of the contract, and shall be entered in full in an invoice book, which shall always be open to public inspection. The chief of this department shall be elected by the qualified voters of the city voting at the annual municipal

election, and shall hold his office for the next municipal year thereafter, subject to the provisions of section two of this act.

SECT. 4. The mayor shall cause to be kept a record of all his official acts, and to aid him in his official duties may appoint one or more clerks.

SECT. 5. The heads of the several departments and offices shall have the power to appoint and employ and to discharge all subordinate officers and employees in their respective departments; and they shall keep a record, subject to inspection, of all so appointed and employed and of all discharged, and in all cases of discharge the grounds therefor, provided, however, that no removals shall be made upon partisan grounds.

SECT. 6. The heads of the several departments and offices shall have the general charge and management of all matters pertaining to their respective departments, and shall make and execute all contracts necessary therefor, except for the purchase of materials and supplies; but every contract made as aforesaid in which the amount involved exceeds three hundred dollars shall be approved by the mayor before going into effect; *provided*, that nothing in this section shall be construed to prevent the city council by ordinance, from transferring any of the duties imposed upon an appointed head of a department by this act or by ordinance excepting the purchase of materials and supplies, to another head of a department or board of commission.

SECT. 7. Neither the city council nor either branch thereof, nor any committee or member thereof, shall directly or indirectly take part in the employment of labor, the purchase of material, the construction, alteration or repair of any public works or other property, or in the care, custody or management of the same, or in general in the expenditure of public money or in the conduct of the executive or administrative business of the city, except as may be necessary for defraying the contingent and incidental expenses of the city council or of either branch thereof; nor shall they or either of them take part in the making of contracts.

SECT. 8. No sum appropriated for a specific purpose shall be expended for any other purpose; and no expenditure shall be made and no liability shall be incurred by or on behalf of the city until the city council has duly voted an appropriation sufficient to meet such expenditure or liability, together with all prior unpaid liabilities which are payable therefrom, except that after the expiration of the financial year and before the making of the regular annual appropriations liabilities payable out of the regular appropriation may be incurred to an amount not exceeding one-sixth of the total of the appropriation made for similar purposes in the preceding year; *provided, however*, that

nothing herein contained shall be construed to restrict or limit the school committee in any expenditure which it is now or may be hereafter authorized to make under any general law of the Commonwealth, or to restrict or limit payments on account of the permanent or temporary debt, or such as are required by law to be made to the Commonwealth.

SECT. 9. All revenues and all moneys accruing to the city of Lowell from any source whatever, except trust funds and the revenues of the water department, shall when collected or paid into the treasury be carried to one general account, to be known as the General Treasury Fund; and all appropriations by or on behalf of said city, except from trust funds and on account of the water department shall be from such fund and as provided in section ten of this act.

SECT. 10. All bills or other claims, before they are finally certified by the auditor or paid, shall pass the inspection of a committee of the city council on accounts. Said committee shall consist of one member of the board of aldermen and two members of the common council, to be elected annually by ballot by the body they respectively represent. Said committee may report any such bill or claim to the city council with their reasons therefor, and no bill or claim so reported shall be passed by the auditor or be paid without the consent of the council. Said committee may require the opinion of the city solicitor as to the legality of a bill or other claim.

SECT. 11. A yea and nay vote of the members of the city council shall be required to pass any order or vote involving the expenditure or appropriation of the public moneys, or involving any debt or liability, and said vote shall be entered upon the records of each branch of the city council.

SECT. 12. Less than a quorum of either branch of the city council, or of the school committee, or of the board of overseers of the poor, may adjourn to a fixed day earlier than the next regular meeting, and shall have power to compel the attendance of absent members in such manner as the city council may by ordinance provide.

SECT. 13. All acts or parts of acts and all ordinances of the city of Lowell inconsistent herewith are hereby repealed and annulled; *provided*, that no act or ordinance heretofore repealed shall thereby be revived; and, *provided, also*, that nothing in this act shall be taken to prohibit the city council from abolishing any department, board, office or commission created by ordinance.

SECT. 14. The question of the acceptance of this act shall be submitted to the qualified voters of the city of Lowell at

the annual state election in the present year, and the affirmative votes of a majority of the voters present and voting thereon shall be required for such acceptance. If so accepted so much thereof as provides for the election of a chief of the department of supplies shall take effect at the next annual municipal election, and the act shall take full effect on the first Monday of January in the year eighteen hundred and ninety-seven. [Approved May 16, 1896.

ACTS OF 1897.

[CHAP. 95.]

AN ACT RELATIVE TO THE DUTIES AND POWERS OF CERTAIN
OFFICERS OF THE CITY OF LOWELL.

Be it enacted, etc., as follows :

SECTION 1. The city council of the city of Lowell, and each branch thereof, shall have and exercise all the power and authority relative to the election or appointment of city officers, or the confirmation of appointments to office which were vested in them prior to the enactment of section one of chapter four hundred and fifteen of the acts of the year eighteen hundred and ninety-six.

SECT. 2. The chief of the fire department of said city shall be elected by concurrent vote of both branches of the city council.

SECT. 3. The city council shall by ordinance determine what officers shall be the heads of the various departments of the city government. The head of the department of supplies may sell or dispose of the personal property of the city, upon the recommendation of the mayor and of the head of the department to which such property belongs, except the products of the city farm, which the superintendent of said farm shall have the right to dispose of.

SECT. 4. All ordinances of said city inconsistent herewith are hereby annulled, and all acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 5. This act shall take effect upon its passage. [Approved February 20, 1897.

ACTS OF 1898.

[CHAP. 173.]

AN ACT RELATIVE TO APPOINTMENTS IN THE FIRE DEPARTMENT OF THE CITY OR LOWELL.

Be it enacted, etc., as follows :

SECTION 1. The chief engineer of the fire department of the city of Lowell may, on the recommendation of the board of engineers, appoint as members of the permanent force, or as call-men, without civil service examination, any person who has served as call or substitute call-man in said service for three or more successive years prior to the passage of this act.

SECT. 2. Said chief engineer shall have the power to discharge all subordinate officers and employees in the fire department of said city, except the members of said board, and, with the approval of said board, to appoint and employ all such officers and employees.

SECT. 3. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 4. This act shall take effect upon its passage. [Approved March 15, 1898.]

ACTS OF 1899.

[CHAP. 170.]

AN ACT RELATIVE TO THE ELECTION OF CITY OFFICERS BY CITY COUNCILS OR BY OTHER MUNICIPAL BODIES OR BOARDS.

Be it enacted, etc., as follows :

SECTION 1. Section one of chapter one hundred and twenty-nine of the acts of the year eighteen hundred and ninety-nine is hereby amended by striking out the whole of said section and inserting in place thereof the following: SECTION 1. Whenever in any city the election of any city officer is vested in the common council or in the board of aldermen, or in both acting jointly or concurrently, or in any other municipal body or board, the election shall not be valid unless it is made by a viva voce vote, each member who is present answering to his name when it is called by the clerk or other proper officer, and stating the name of the person for whom he votes, or declining to vote, as the case may be; and the clerk or other proper officer shall record every such vote.

SECT. 2. This act shall take effect upon its passage. [Approved March 20, 1899.]

ORDINANCES OF THE CITY OF LOWELL

PASSED SINCE 1894.

AN ORDINANCE AUTHORIZING THE CITY TREASURER TO ISSUE REGISTERED CERTIFICATES, NOTES OR BONDS IN EXCHANGE FOR CERTIFICATES, NOTES OR BONDS PAYABLE TO BEARER.

Be it ordained, etc., as follows :

The city treasurer may, in accordance with the provisions of section 5 of chapter 77 of the public statutes, at the request of the owner or holder of any bond, promissory note or certificate of indebtedness of the city of Lowell, at any time while more than one year remains before the principal of such bond, note or certificate is payable, issue in exchange therefor a bond, note or certificate of same effect, payable to the owner or holder by name.

The city treasurer may also, under like condition, issue registered certificates, in substitution for any mutilated, defaced or indorsed bonds, notes or certificates ; and where a bond, note or certificate of any issue has been lost or destroyed, the city treasurer, under the direction of the joint standing committee on finance, may issue in place thereof a new bond, note or certificate of the same effect.

The city auditor, as well as the city treasurer, shall keep a register of the dates, numbers and amounts of all bonds, notes and certificates issued by the city treasurer, showing to whom they were issued, when they are payable, and if issued in exchange, for what they were substituted. [Approved May 12, 1896.

AN ORDINANCE AMENDING SECTION THIRTEEN OF CHAPTER ONE OF THE REVISED ORDINANCES SO AS TO PROVIDE THAT THE SALARIES AND COMPENSATION OF CITY OFFICERS WHEN ONCE ESTABLISHED SHALL CONTINUE UNTIL RE-ESTABLISHED OR CHANGED.

Be it ordained, etc., as follows :

Section 13 of chapter 1 of the revised ordinances is hereby amended by striking out between the word "year" in the third line of said section and the word "provided" in the sixth

line thereof, the following words: "for the year commencing on the first Monday of January next ensuing; and no change of salary shall be made to take effect during the time for which said salary was established," and inserting in place thereof the following: "provided that when such salaries and compensation shall have been once established, they shall continue until re-established or changed in pursuance of the provisions of this section; and," so that said section as amended shall read as follows:

SECTION 13. The salaries and compensation of city officers shall be established in the month of December and after the annual municipal election shall have been held, in each year; provided, that when such salaries and compensations shall have been once established, they shall continue until re-established or changed in pursuance of the provisions of this section; and provided that in case any new office shall be created, the salary of said newly created office may be fixed at any time; and the salaries or compensation fixed for the payment of said officers shall be in full for all services performed by them by virtue of their offices; and all sums of money received by them from any and every source, in discharge of said services during any quarter of the fiscal year, shall at the expiration of said quarter be by them paid over or accounted for to the city treasurer. [Approved May 12, 1896.]

AN ORDINANCE REGULATING THE WEIGHING AND MEASURING OF
CERTAIN ARTICLES PURCHASED BY THE CITY.

Be it ordained, etc., as follows:

All supplies of hay, grain, straw, coal, and any other material purchased for the use of the city or any department thereof exceeding one hundred pounds in weight and usually weighed, shall be weighed on the city scales, and all wood purchased for said city shall be measured by the city measurer of wood, and no bills shall be paid by the city treasurer, or approved by any committee for such article so furnished the city, unless the certificate of said weigher or measurer shall accompany or be attached to said bill. [Approved May 12, 1896.]

AN ORDINANCE TO PREVENT THE PLACING OF ASHES, GLASS,
CROCKERY, ETC., IN OR ON THE PUBLIC STREETS OR
WAYS.

Be it ordained, etc., as follows:

SECTION 1. Any person who shall put or place, or cause to be put or placed, in or upon any street, lane or alley, or other

public place in this city, any ashes, glass, crockery, scrap iron, nails, tacks or any other article which would be liable to injure the feet of children or animals or the tires of bicycles or other vehicles which have wheels with rubber or pneumatic tires, shall be deemed guilty of a misdemeanor.

SECT. 2. Any person violating the provisions of the preceding section or who is guilty of the misdemeanor therein described, shall be liable to a fine not less than two dollars, or more than twenty dollars for each offence. [Approved Oct. 9, 1896.

AN ORDINANCE AMENDING SECTIONS ONE AND NINE OF CHAPTER
TWENTY OF THE ORDINANCES OF THE CITY OF LOWELL.

Be it ordained, etc., as follows :

SECTION 1. That section 1 of chapter 20 of the ordinances of the city of Lowell be and the same is hereby amended by inserting after the word "engineer" in the second line of said section, the words, "a first assistant engineer and three other," and by striking out the word "four" in the second line of said section, and by inserting after the word "removed" in the sixteenth line of said section, the words "the first assistant engineer shall be appointed by the mayor and aldermen in the month of March or April, or whenever a vacancy occurs, and he shall enter upon the discharge of the duties of his office on the first day of May of the year in which appointed, if appointed for a full term prior to May of any year, and he shall hold said office for a term of three years from said first day of May, and until his successor is appointed, or he is removed ; and if appointed after the first day of May in any year, he shall enter upon the duties of said office forthwith and shall continue therein until the expiration of the full term as existing at the time of said appointment, or until removed," and by inserting between the words, "said" and "assistant" in the seventeenth line of said section, the word "other" and by inserting after the word "engineer" in the twenty-eighth line of said section, and before the word "shall" in the twenty-ninth line of said section, the words "and first assistant engineer," so that said section shall read as follows :

SECTION 1. The fire department shall consist of a chief engineer, a first assistant engineer, who shall perform such duties as may be required of him by the chief engineer, and three other assistant engineers and as many enginemen, hose men, hook and ladder men, and other persons, to be divided into companies, as the number of engines and other fire apparatus of the city shall from time to time require; the chief engineer shall be appointed by the mayor and aldermen in the month of

March or April, and whenever a vacancy occurs, and he shall enter upon the discharge of the duties of said office on the first day of May of the year in which appointed, if appointed for a full term prior to May of any year, and he shall hold said office for a term of three years from said first day of May or until he is removed; and if appointed after the first day of May of any year, he shall enter upon the discharge of the duties of said office forthwith, and shall continue therein until the expiration of the full term as existing at the time of his said appointment, or until removed. The first assistant engineer shall be appointed by the mayor and aldermen in the month of March or April, and whenever a vacancy occurs, and he shall enter upon the discharge of the duties of his office on the first day of May of the year in which appointed, if appointed for a full term prior to May of any year, and he shall hold said office for a term of three years from said first day of May and until his successor is appointed or he is removed; and if appointed after the first day of May in any year, he shall enter upon the duties of said office forthwith, and shall continue therein until the expiration of the full term as existing at the time of his said appointment, or until he is removed; and the appointment of said other assistant engineers shall be made by the mayor and aldermen in the month of March or April annually, and whenever a vacancy occurs; and they shall hold their respective offices for the term of one year from the first day of May succeeding their appointment, or until others are chosen; all other members of the fire department shall be nominated by the board of engineers, and their names sent to the mayor and aldermen, and when by them appointed they shall be members of the fire department; provided, that vacancies may be filled at any time, and that the mayor and aldermen may at any time remove any and all of said officers or members; except that the chief engineer and first assistant engineer shall not be removed without a hearing and cause shown thereat. No person shall be appointed a member of the fire department who does not sustain a good moral character and who is not a citizen of the city of Lowell.

SECT. 2. This ordinance shall take effect upon its passage
Approved Nov. 27, 1896.

AN ORDINANCE IN RELATION TO AN ORDINANCE ON OPENINGS AND EXCAVATIONS IN STREETS AND IMPOSING A PENALTY.

Be it ordained, etc., as follows:

SECTION 1. No person, firm or corporation shall dig up, make any excavation in, or in any manner change or interfere

with the surface or grade of any street for the purpose of laying water, gas or sewer pipes or railway tracks, or for any other purpose, without first giving notice to the superintendent of streets, which notice shall state specifically the time when work will be commenced and the probable time within which it shall be completed.

SECT. 2. When any opening or excavation shall be made in any street in pursuance of section 1, the superintendent of streets, by himself or by a servant or agent appointed by him for the purpose, shall see that the surface of such streets is left in good order and condition for public travel thereon. The expense for labor and material used in closing and covering such excavation shall in all cases be borne by the party causing the same to be made.

SECT. 3. Said superintendent shall, when about to build a new sewer or repair an old one, notify all the abutters on that part of the line of said sewer when he proposes to do work so that said abutters may enter said sewer. He shall notify all abutters, when about to construct a new street, at least four weeks before beginning work, and when about to make a new surface of any street, at least two weeks before beginning work, shall notify the superintendent of lamps and water board and all persons authorized to place any obstruction in such street, and shall require and see that all said departments or persons having any work to be done in the street so designated, shall do all such work before the surface of such street is again prepared for and opened to public travel, and after the completion of the work then done in such street, shall not permit any department or person who shall have been so notified, for the space of two years, to again disturb the surface of such street or way within the area of such previous disturbance, except in case of obvious necessity, to be verified in writing to, and approved by the mayor, and except in cases of tracks or leaks in pipes, sewers or wires.

SECT. 4. Any person, firm or corporation who shall dig up, make any excavations, or in any way change or alter the grade or surface of any accepted street, without giving the notice mentioned in section 1 of this ordinance shall be punished by a fine not exceeding twenty dollars.

SECT. 5. All ordinances and parts of ordinances, resolutions and orders of the city council inconsistent herewith, are hereby repealed. [Approved November 27, 1896.]

AN ORDINANCE CREATING THE OFFICE OF SUPERINTENDENT OF COMMONS AND PROVIDING FOR THE ELECTION OF SUCH OFFICER.

Be it ordained, etc., as follows :

SECTION 1. There shall be chosen by concurrent vote of both branches of the city council in the month of January, 1898, a superintendent of commons ; and in the month of January in each year thereafter, the city council by concurrent vote of both branches shall elect a superintendent of commons who shall hold his office for one year and until his successor is chosen, but said officer may be removed from office at any time by a two-thirds vote of both branches of the city council voting by yeas and nays. Any vacancy which may occur in said office shall be filled in like manner by concurrent vote of the city council for the remainder of the unexpired term.

SECT. 2 Said superintendent of commons shall be the head of the department of commons, and shall have the care and control of all the commons and parks of the city and of all the property connected with said department, and shall have the general care and management of all matters pertaining to said department ; shall make and execute all contracts necessary therefor, except for the purchase of material and supplies, but every contract made as aforesaid in which the amount involved exceeds three hundred dollars, shall be approved by the mayor before going into effect. [Approved June 18, 1897.

AN ORDINANCE AMENDING SECTION TWELVE OF CHAPTER FIVE OF THE REVISED ORDINANCES.

Be it ordained, etc., as follows :

That section 12 of the revised ordinances of the city of Lowell be and the same is hereby amended by striking out the words, "nor on either side of Westford Street from the westerly line of Grand Street to the easterly line of Royal Street for a distance of fifty feet back from either line of Westford Street." [Approved July 21, 1897.

AN ORDINANCE AMENDING SECTION FIFTEEN, CHAPTER THIRTY-NINE OF THE REVISED ORDINANCES OF THE YEAR EIGHTEEN HUNDRED AND NINETY-FOUR.

Be it ordained, etc., as follows :

That section 15, chapter 39, of the revised ordinances of 1894 be and is hereby amended by striking out of the seventh line the word "forty-third," and inserting in place thereof the word "forty-fifth." [Approved July 21, 1897.

AN ORDINANCE REGULATING HAWKERS AND PEDDLERS.

Be it ordained, etc., as follows:

SECTION 1. No person shall hawk or peddle, sell or expose for sale within said city any of the articles enumerated in section 1 of chapter 68 of the public statutes, until he has been duly licensed by and has recorded his name and residence with the board of police of the city of Lowell, and has been assigned a number by said board, to be worn in such manner as said board may prescribe. Provided, however, that the foregoing provisions shall not apply to any other person than the one named in the license.

SECT. 2. No person hawking, peddling or selling, or exposing for sale any of the articles enumerated in section 1 of chapter 68 of the public statutes, shall cry his wares to the disturbance of the peace and comfort of the inhabitants of the city.

SECT. 3. No hawker or peddler shall carry or convey any of the articles enumerated in chapter 68 of the public statutes in any manner that will tend to injure the public health, or disturb the public peace or comfort, nor otherwise than in vehicles and receptacles which have printed on them in letters and figures at least two inches in height the name of the person selling and the number given him by the board of police.

SECT. 4. Whoever violates any of the provisions of the preceding sections of this ordinance shall be liable to a penalty of not more than twenty dollars for each offence. [Approved July 29, 1897.]

AN ORDINANCE TO AMEND SECTION EIGHTEEN OF CHAPTER SIX
OF THE CITY ORDINANCES RELATING TO THE HITCHING OF
HORSES TO LAMP POSTS.

Be it ordained, etc., as follows:

Section 18 of chapter 6 of the city ordinances is hereby amended by striking out all after the word "any" in the third line thereof and inserting instead thereof the words "lamp post maintained by the city;" so that said section as amended shall read as follows:

SECT. 18. No owner, driver or other person having the care or ordering of a vehicle shall hitch or fasten the horse or horses attached thereto to any lamp post maintained by the city. [Approved January 1, 1898.]

AN ORDINANCE AUTHORIZING THE CITY TREASURER TO PRESCRIBE THE SYSTEM OF BOOK-KEEPING FOR CERTAIN DEPARTMENTS AND OFFICERS RECEIVING MONEY BELONGING TO THE CITY AND PROVIDING FOR MORE FREQUENT RETURNS OF SUCH MONEY TO THE CITY TREASURY.

Be it ordained etc., as follows :

SECTION 1. All departments and officers of the city government, except the city treasurer, whose official duty requires the receipt of money belonging to the city, shall keep such books and records relating to the same as shall be prescribed by the city treasurer.

SECT. 2. The heads of each department and officers receiving money for the city shall remit to the treasurer as often as once in each month any balance that may be in the possession of such department or officer belonging to the city, except in case when the time for such payment into the city treasury is prescribed by statute.

SECT. 3. The joint committee on accounts shall annually, in connection with the annual examination of the accounts of the city treasurer, examine, investigate and audit the books and accounts of all departments and officers receiving money for the city, and said committee shall make report of such examinations to the city council.

SECT. 4. All heads of departments and officers whose official duty requires the rendering of bills to individuals, cities or towns for charges of any nature, shall hereafter deliver all such bills to the city treasurer for collection through his office.

SECT. 5. Section nine of chapter one of the revised ordinances and all ordinances and parts of ordinances inconsistent herewith are hereby repealed. [Approved January 1, 1898.

AN ORDINANCE PROVIDING FOR ESTIMATES FOR APPROPRIATIONS
AND FOR OTHER PURPOSES.

Be it ordained, etc., as follows :

SECTION 1. At the beginning of each municipal year and not later than the third Tuesday in January the mayor shall make and transmit to the city council an estimate of the expenditures required for the year. Such estimate shall be framed and itemized so as to show separately :

PAR. 2. The amounts required by each department, office, board, commission or other subdivision of the executive branch of the government, and so far as may be practicable for the subdivisions of the work of each department.

PAR. 3. The salary or compensation of each officer, deputy, assistant, clerk, or employee of the city not classed as a laborer. The amounts required for labor shall, when practicable, be stated separately from those for material and supplies.

PAR. 4. Such estimate shall be in such form as to show in parallel columns, opposite each item, the amount paid for the previous year, and the amount unexpended at the close of such year.

SECT. 2. The mayor shall make, or cause to be made, and shall transmit to the city council with the estimate required by the preceding section:

PAR. 2. An itemized estimate of the revenues of the year from all sources except taxation of real and personal property and polls.

PAR. 3. A statement of the balance unpaid at the close of the previous year on account of temporary loans, and the amount due by financial years, as unpaid taxes on real and personal property and polls.

PAR. 4. An itemized statement of the debt, with interest becoming due during the year, and the margin available for loans within the debt limit for the year;

PAR. 5. An itemized statement of all orders, etc., of the city council involving expenditures which have not been appropriated for. In all cases the finances of the water service shall be shown separately.

SECT. 3. All regular annual appropriations shall be for and only applicable to the liabilities incurred during the year in which they are made, any form of phrasèclogy in the order, resolution or vote providing for the same, to the contrary notwithstanding.

PAR. 2. It shall be the duty of the auditor to close all regular annual appropriation accounts with the last secular day in December of the year for which the appropriations are made, and to credit the general treasury fund account or accounts with the water service, as the case may be, with the balance to the credit of such appropriations; and thereafter, no payments shall be made under such appropriations. He shall promptly report to the city council the amount of each balance thus cred-

ited, and amount available in the general treasury fund, and the account with the water service, for the expenditures of the current year not otherwise appropriated.

PAR. 3. All claims, accounts and bills against the city of Lowell under such appropriations remaining unpaid at such date, shall be numbered consecutively, and be entered by the auditor in such order, in a permanent book of record, to be known as a register of claims, so as to show the name of the claimant, the amount claimed and allowed, the nature of the service and the action had thereon. The auditor shall transmit to the city council on or before the first regular meeting night in February, of either branch of the city council, a schedule of such claims with a condensed statement of the nature of each claim, and the action had thereon.

SECT. 4. The several estimates and statements called for by this ordinance shall on their receipt by either branch of the city council be referred, without other action, to the joint committee on appropriations.

PAR. 2. The committee on appropriations shall consist of the chairman and two additional members of the board of aldermen, and the president and three additional members of the common council.

Section 6, of chapter 1, of the ordinances of the city of Lowell is hereby repealed.

PAR. 3. Said committee shall have access to all or any of the records and official papers of the city, shall have power to require from any officer or employee of the city such additional statement or statements relating to the expenditures and revenues of the city as it may deem essential, and to summon any officer or employee of the city to be present at any designated meeting of said committee and to remain in attendance until discharged by the committee; and any officer or employee who shall fail or refuse to comply with such request, order or summons may be reported to the city council, or either branch thereof, for such action as it may have the power to take and see fit to exercise.

SECT. 5. The committee on appropriations shall make a final report in print, not exceeding two hundred copies, to the city council or either branch thereof, on or before the fifteenth day of February of each year unless granted further time by the city council.

SECT. 6. All ordinances and parts of ordinances conflicting with this ordinance are hereby repealed. [Approved January 1, 1898.]

AN ORDINANCE PROVIDING FOR THE APPOINTMENT OF AN INSPECTOR OF WIRES AND DEFINING THE DUTIES OF SUCH OFFICER, IN ACCORDANCE WITH CHAPTER FOUR HUNDRED AND FOUR, ACTS OF 1890.

Be it ordained, etc., as follows :

SECTION 1. Within thirty days after the passage of this ordinance, there shall be appointed by the mayor, subject to confirmation of the board of aldermen, an inspector of wires for the city of Lowell, who shall enter upon the duties of his office immediately and shall hold said office, unless sooner removed, until the first day of February, 1901; and prior to the first day of February, 1901, and prior to the first day of February of every third year thereafter, there shall be appointed in like manner an inspector of wires who shall hold his office during a term of three years and until his successor is appointed, unless sooner removed in the manner prescribed by law.

SECT. 2. Said inspector of wires shall perform the duties prescribed by section 3, chapter 404 of the acts of 1890, and such other duties as are or may be hereafter prescribed by the laws of the commonwealth or the ordinances of the city. He shall annually in the month of January make a report to the city council of the business of his office for the year ending on the thirty-first day of December next preceding. [Approved July 15, 1898.]

AN ORDINANCE RELATING TO THE PERMANENT REPAIRS ON STREETS AND THE PLACING OF UNDERGROUND SERVICES THEREIN; ALSO TO THE NECESSARY REPAIRS OF SAME.

Be it ordained, etc., as follows :

SECTION 1. That before any street is paved with granite, concrete or other paving, macadamized or otherwise put in permanent repair by the city, the owners of land abutting on such street shall be notified at least four weeks previous to the time when such permanent improvements are to be commenced, that all underground services, whether for sewer, water, gas, electrical or other connections shall be constructed and placed in said street previous to the date set for the making of the said permanent improvements.

SECT. 2. That all corporations or individuals having services laid in said street, or intending or desiring to construct the same, whether for gas, electric, telephone, telegraph, or for any service of whatsoever nature, or who shall desire to renew

or repair services already constructed, shall be notified by the posting of a notice at the city hall of the intention of the city to so repair such street, and by a notice which shall be published for six consecutive days in one morning and one evening newspaper printed in the city of Lowell, the last publication of said notice to be at least three weeks previous to the time stated for making said permanent improvements.

SECT. 3. That when any street has been so paved, macadamized, or otherwise put in permanent repair; it shall not be opened or torn up for the placing of any new underground construction of any nature whatsoever during five years next succeeding the date in said published and posted notices stating the intention of the city to place said street in permanent repair; provided, however, that in case repairs to any service become necessary, the same may be made after a permit has been granted by the board of aldermen, and said repairs shall be made under the supervision of the superintendent of streets. In case of leakage of gas or water pipes, the same may be repaired at once by the gas company or water board, and the surface of the street placed in a condition satisfactory to the superintendent of streets.

SECT. 4. Wherever on said street there may be unimproved land, and where no sewer, gas, water, or other necessary services have been constructed, the same shall be laid and constructed, to a point at least two feet beyond the outside line of the sidewalk on said street, one each of the services mentioned for gas, water and sewer connections, for each fifty feet of frontage of the said land on the said street, or at such distances as may be agreed upon by the owner of said land and the superintendent of streets. In case of neglect of the owner or of a corporation or individual to construct the same, said service for sewer, water and gas connections may be constructed by the city, and shall be paid for by the parties to whom rightfully belongs the construction of the same.

SECT. 5. Any violation of the foregoing conditions in regard to the digging up of streets shall be punished by a fine of not less than twenty dollars (\$20).

SECT. 6. All ordinances and parts of ordinances inconsistent herewith are hereby repealed. [Approved August 5, 1898.

AN ORDINANCE PROVIDING FOR THE APPOINTMENT OF A SUPER-
INTENDENT AND ASSISTANT SUPERINTENDANT OF STATE AID.

Be it ordained, etc., as follows :

SECTION 1. Within thirty days after the passage of this ordinance there shall be appointed by the mayor, subject to confirmation of the board of aldermen, a superintendent of state aid and an assistant superintendent of state aid for the city of Lowell, who shall enter upon the duties of their offices immediately and shall hold said offices, unless sooner removed, until the first day of February, 1899, and prior to the first day of February, 1899, and prior to the first day of February of every year thereafter, there shall be appointed in like manner a superintendent of state aid and an assistant superintendent of state aid, who shall hold their offices during a term of one year and until their successors are appointed, unless sooner removed in the manner prescribed by law.

SECT. 2. Said superintendent of state aid shall disburse state aid and city aid under the direction of the mayor and board of aldermen as prescribed by chapter 279 of the acts of 1893, chapter 279 and 301 of the Acts of 1894, chapter 279 of the acts of 1896, chapter 561 of the acts of 1898, or any other laws of the commonwealth, or that may be hereafter prescribed by the ordinances of the city. He shall annually, in the month of January, make a report to the city council of the business of his office for the year ending on the thirty-first of December next preceding.

SECT. 3. Said assistant superintendent of state aid shall perform such duties as may be prescribed by the superintendent of state aid. [Approved September 27, 1898.

AN ORDINANCE AMENDING SECTION SIX OF CHAPTER NINE OF THE
REVISED ORDINANCES OF THE CITY OF LOWELL.

Be it ordained, etc., as follows :

That chapter 9 of the revised ordinances of the city of Lowell be amended by striking out section 6 and substituting therefor the following :

SECT. 6. The city treasurer shall receive and have the care and custody of all sums of money paid the city by persons for the perpetual care of lots in any of the city cemeteries, and give the vouchers of the city therefor, and money so received shall constitute a special fund to be known as the "Cemetery Fund for the perpetual care of lots." The treasurer shall not

receive a sum of money less than one hundred dollars (\$100 00) for the perpetual care of lots in any of the city cemeteries or public burial grounds. The treasurer shall notify the superintendent of the cemetery of all such payments, together with the description of the lots and graves on account of which such payments are made, and annually at such time as the trustees of public burial grounds request, shall pay over to them four per centum as interest upon all sums so paid to and receipted by him. The treasurer shall invest the moneys of this fund in securities in which by law the funds of savings banks may be invested, and pay the amount of interest realized thereon into the city treasury. [Approved October 11, 1898.

AN ORDINANCE RELATING TO THE CONSTRUCTION AND REPAIR
OF BUILDINGS.

Be it ordained, etc., as follows :

SECTION 1. Before the repair, erection, construction or material alteration of any building, the owner, architect or builder thereof shall file with the superintendent of buildings a statement in writing giving the intended location of such building, its dimensions, materials, manner of construction and estimated cost. If such building is to be repaired, erected or materially altered within the fire limits of the city, such owner, architect or builder shall, in addition to the statement aforesaid, submit for examination full specifications and plans of the proposed repairs, buildings or alterations; the owner or contractor shall also sign an agreement that the proposed work shall be done in accordance with the description set forth in such plans, specifications and statement, and all such matters and things connected with such work shall be done in strict compliance with this chapter. If it appears from said statement, plans and specifications that the building to be erected, altered or repaired will conform to the provisions of this chapter, so far as applicable thereto, then the superintendent of buildings shall issue a permit. No person shall repair, construct or materially alter any building without such permit.

SECT. 2. The superintendent of buildings shall furnish suitable blanks upon which applications shall be made; and such applications shall be recorded by the assessors in a book provided for the purpose, each page of which shall be a duplicate of such application for the erection, construction or material alteration of any building in the city of Lowell after the passage of this ordinance.

SECT. 3. This ordinance shall take effect upon its passage.
[Approved, December 29, 1893.

AN ORDINANCE RELATING TO ASSESSMENT OF TAXES IN THE CITY
OF LOWELL.

Be it ordained, etc., as follows:

Chapter 3 of the revised ordinances of 1894 is hereby amended by striking out all after section 1 of said chapter, and substituting in place thereof the following:

SECT. 2. The board of assessors shall annually, in the month of January, or as soon as practicable thereafter, organize, by choosing one of their number to act as chairman; said chairman shall not receive extra compensation, and all members of the board shall devote their whole time to the service of the city.

SECT. 3. It shall be the duty of the assessors of taxes to complete their assessment and place the list of taxes in the hands of the collector of taxes on or before the first day of September, annually; and they shall, on or before the first day of September, annually, indicate on said list the residence of the several taxpayers for that year and the year next preceding.

SECT. 4. When any tax shall be abated in whole or in part by the assessors of taxes, they shall make a record thereof in a book to be kept by them for that purpose, which record shall contain the names of all persons whose taxes may be so abated, and the reasons for such abatement; and they shall also annually, in the month of January, make out and transmit to the City Council a full report of the work of their board, said report to show the total valuation of the city, amount of real estate, amount of personal estate, total corporation valuation in detail, total valuation in bank stock, street-watering assessment, number of polls, name, amount and reason of any abatement of taxes, and such other items as may be of interest to the public. Said figures to be in a column parallel to a column containing the figures of the preceding year.

SECT. 5. The assessors shall annually, on the 31st day of December, report to the auditor all abatements of taxes made by them during the year ending on said day, distinguishing the abatements made on the different years' taxes, and whether abated before or after collection.

SECT. 6. The assessors shall have full power to hire as many temporary clerks, not to exceed six, as may be necessary to

assist them in the performance of their duties, the compensation of said clerks not to exceed two dollars and fifty cents per day, and they shall only be employed during the months of May to September inclusive. Provided, however, that permanent clerks, not to exceed two, one to be known as chief clerk, may be employed the whole year at such compensation as the Board may determine. They shall also have the power to employ six temporary assistants during the months of May and June for the purpose of obtaining the lists of polls and incidental personal property, compensation not to exceed three dollars per day. Said assistant assessors shall be appointed by the mayor, subject to confirmation by the board of aldermen and common council.

SECT. 7. This ordinance shall take effect upon its passage.
[Approved February 28, 1899.]

POPULATION, LEGAL VOTERS, ETC., BY WARDS.

Wards	Census 1895	Precincts	RLGISTERED VOTERS									VOTE FOR MAYOR 1898	
			Dec., 1897 City Election			Nov., 1898 State Election			Dec, 1898 City Election			Bennett	Crowley
			Males	Females	Total	Males	Females	Total	Males	Females	Total		
1	9,506	1	539	46	585	500	43	543	525	43	568	269	176
2		590	69	659	518	57	575	541	58	600	218	236	
3		412	20	432	389	16	405	410	16	426	165	196	
2	10,495	1	1541	135	1676	1497	116	1523	1476	117	1594	652	608
		2	456	44	500	394	38	432	414	38	452	130	235
		3	505	24	529	451	18	469	479	18	497	74	348
3	9,236	1	578	17	595	520	16	536	544	16	560	78	406
		2	1539	85	1624	1365	72	1437	1437	72	1509	282	989
		3	556	56	612	513	46	559	534	46	581	172	292
4	9,240	1	674	29	703	647	23	670	667	23	690	367	185
		2	658	46	704	630	36	666	651	36	689	364	167
		3	1888	131	2019	1790	105	1895	1852	105	1960	903	644
5	8,454	1	531	21	552	459	15	474	486	15	501	152	244
		2	510	37	547	499	32	531	513	32	544	132	321
		3	686	36	722	663	33	696	678	33	711	130	487
6	9,332	1	1727	94	1821	1621	80	1701	1677	80	1756	414	1052
		2	494	42	536	443	33	476	475	33	505	154	264
		3	589	53	642	552	42	595	568	42	610	127	371
7	13,120	1	527	52	579	460	40	500	479	40	519	89	340
		2	1610	147	1757	1456	115	1571	1522	115	1634	370	975
		3	679	107	786	643	104	747	657	104	761	343	201
8	7,938	1	581	41	622	532	29	561	549	29	578	211	258
		2	553	28	581	568	27	595	597	27	624	205	318
		3	1813	176	1989	1743	160	1903	1803	160	1963	759	777
9	7,038	1	619	59	678	584	54	638	599	54	653	325	193
		2	705	153	858	674	144	818	686	144	829	358	331
		3	542	74	616	589	66	655	606	66	672	248	267
10	84,359	1	1866	286	2152	1847	264	2111	1891	264	2154	831	791
		2	647	24	671	662	23	685	678	24	702	385	185
		3	708	43	751	715	42	757	728	42	770	413	189
11	7,938	1	657	59	716	659	52	711	669	52	721	273	267
		2	2012	126	2138	2036	117	2153	2075	118	2193	1071	641
		3	520	105	625	484	92	576	493	94	588	263	168
12	7,038	1	517	86	603	528	74	602	538	73	611	214	252
		2	709	49	758	698	45	743	729	46	775	259	376
		3	1746	240	1986	1710	211	1921	1760	213	1971	736	796
84,359			15742	1420	17162	14975	1240	16215	15493	1241	16734	6018	7273

POPULATION OF THE CITY OF LOWELL.

Year.	Population	Year.	Population.	Year	Population.	Year.	Population.
1828	3,532	1837	18,010	1855	37,554	1875	49,688
1830	6,477	1840	20,981	1860	36,827	1880	59,485
1832	10,254	1844	25,163	1865	30,990	1885	64,107
1833	12,963	1846	29,127	1866	36,878	1890	77,696
1836	17,633	1850	33,383	1870	40,928	1895	84,359

CATALOGUE

OF THE

GOVERNMENT OF THE CITY OF LOWELL

IN

CHRONOLOGICAL ORDER OF SERVICE

From Its Institution 1836, to 1898, Inclusive.

1836.**MAYOR:****ELISHA BARTLETT.****ALDERMEN:**

William Austin, resigned Oct. 10.	Benjamin Walker.
Joseph Tapley, elected November.	Oliver M. Whipple.
Seth Ames.	Alexander Wright.
Aaron Mansur.	

SAMUEL A. COBURN, City Clerk.**COMMON COUNCIL:**

John Clark, President.	Stephen Mansur.
Henry J. Baxter.	John Mixer.
Jonathan Bowers.	Thomas Nesmith.
George Brownell.	David Nourse.
James Cook.	Thomas Ordway.
David Dana.	James Russell.
Erastus Douglass.	John A. Savels.
Josiah B. French.	Sidney Spalding.
Cyril French.	Weld Spalding.
Samuel Garland.	Jonathan Tyler.
Horatio W. Hastings.	Tappan Wentworth.
Horace Howard.	William Wyman.

GEORGE WOODWARD, Clerk, died. ALBERT LOCKE, elected.

1837.**MAYOR:****ELISHA BARTLETT, † '36.****ALDERMEN:**

Seth Ames, *'36.	Joseph G. Kittredge.
John Aiken.	Joshua Swan.
Seth Chellis	Alexander Wright, *'36.

SAMUEL A. COBURN, City Clerk.

COMMON COUNCIL:**WARD 1.**

Joshua Abbott.
James K. Fellows.
Jesse Phelps.
Walter Wright.

WARD 2.

William Fiske.
Thomas Nesmith, '36.
Josiah Osgood.
Joseph Tyler.

WARD 3.

Joseph M. Dodge.
Elisha Huntington, President.
William North.
Joseph Tapley.

WARD 4.

William Baker.
Elijha M. Read.
Charles H. Wilder.
William W. Wyman.

WARD 5.

George Brownell, '36.
Osgood Dane.
James Russell, '36.
Tappan Wentworth, '36.

WARD 6.

Andrew Bird.
Benjamin H. Gage.
Jona. T. P. Hunt.
Abram Tilton.

ALBERT LOCKE, Clerk.

The figures without other marks indicate membership of the Common Council those years. † Mayor that year. * Alderman that year. ‡ President of the Common Council that year.

1838

MAYOR:

LUTHER LAWRENCE.

ALDERMEN:

Benjamin F. French.
Charles L. Tilden.
Oliver M. Whipple, *'36.

George H. Carleton.
George Brownell, '36, '37.
Seth Chellis, *'37.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:

WARD 1.

Jesse Phelps, '37.
Walter Wright, '37.
Eliphalet Brown.
Perez Fuller.

WARD 2.

William Fiske, '37.
Aaron H. Sherman.
William Upham.
Henry J. Baxter, '36.

WARD 3.

Thomas Hopkinson.
Elisha Huntington, †'37, President.
Horace Howard, '36.
John Mixer, '36.

WARD 4.

David Dana, '36.
Perley Hale.
Benjamin Walker, *'36.
William Baker, '37.

WARD 5.

Garret J. Bradt.
Benjamin Wilde.
Erastus Douglass, '36.
Rufus Paul.

WARD 6.

Eli Cooper.
Thomas L. Randlett.
James L. Foot.
Calvin Goodspeed.

ALBERT LOCKE, Clerk.

1839.

MAYOR:

LUTHER LAWRENCE. — [Died in April.]

ELISHA HUNTINGTON, † '37, † '38.

ALDERMEN:

Benjamin F. French, *'38.
John O. Green.
Charles L. Tilden, *'38.

George H. Carleton, *'38.
John Clark, † '36.
Oliver M. Whipple, * '36, *'38.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:

WARD 1.

Walter Wright, '37, '38.
Harlin Pillsbury.
Eliphalet Brown, '38.
Forrest Eaton.

WARD 2.

Jonathan Tyler, '36.
John Nesmith.
Henry J. Baxter, '36, '38.
Jefferson Bancroft.

WARD 3.

Thomas Hopkinson, '38, President.
Jacob Robbins.
John G. Locke.

WARD 4.

Benjamin Walker, *'36, '38.
Samuel Horn.
Stephen Carleton.
Stephen Mansur, '36.

WARD 5.

Tappan Wentworth, '36, '37.
Lewis McIntire, died Feb., 1840.
Benjamin Wilde, '38.
Garret J. Bradt, '38.

WARD 6.

Thomas L. Randlett, '38.
Joseph S. Holt.
John L. Fitts.
Daniel Knapp.

ALBERT LOCKE, Clerk.

1840.**MAYOR:****ELISHA HUNTINGTON**, ‡ '37, ‡ '38, ‡ '39.**ALDERMEN:**

Jonathan Tyler, '36, '39.
 John R. Adams.
 Joseph Bedlow.

Harlin Pillsbury, '39.
 Seth Ames, *'36, *'37.
 Stephen Mansur, '36, '39.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Forrest Eaton, '39.
 Sylvanus Adams.
 Henry Patch.
 R. M. Hutchinson.

WARD 2.

Jefferson Bancroft, '39.
 John Nesmith, '39.
 Joseph G. Kittredge, *'37.
 Josiah Osgood, '37.

WARD 3.

Pelham W. Warren, President.
 Abner W. Buttrick.
 Asa Hall.
 Samuel Burbank.

WARD 4.

Ferdinand Rodliff.
 Ethan Burnap.
 Edward F. Watson.
 B. Walker, *'36, '38, '39, died Sept.

WARD 5.

Tappan Wentworth, '36, '37, '39.
 Samuel W. Brown.
 John J. Crane.
 George Dane.

WARD 6.

Daniel Knapp, '39.
 George L. Fitts, '39.
 Joseph Battles.
 Joshua Converse.

ALBERT LOCKE, Clerk, died October. **JOHN G. LOCKE**, elected October.**1841.****MAYOR:****ELISHA HUNTINGTON**, ‡ '37, ‡ '38, ‡ '39, ‡ '40.**ALDERMEN:**

Seth Chellis, *'37, '38.
 Jefferson Bancroft, '39, '40.
 Cyril French, '36.

George H. Carleton, *'38, *'39.
 John R. Adams, *'40.
 John Aiken, *'37.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Henry Patch, '40.
 George Bragdon.
 John W. Holland.
 Arnold Welch.

WARD 2.

William Fiske, '37, '38.
 Erasmus D. Leavitt.
 Jonathan White.
 Nathaniel Wilson.

WARD 3.

Samuel Burbank, '40.
 Nathaniel Critchett.
 Royal Southwick.
 Edward Winslow.

WARD 4.

Ethan Burnap, '40.
 William Livingston.
 John Morrison.
 Edward F. Watson, '40.

WARD 5.

Tappan Wentworth, '36, '37, '39, '40, Pres.
 Samuel W. Brown, '40.
 John J. Crane, '40.
 Phineas Whiting.

WARD 6.

Francis H. Bowers.
 Isaac H. Cooper.
 William Potter.
 John Smith.

JOHN G. LOCKE, Clerk.

1842.**MAYOR:****NATHANIEL WRIGHT.****ALDERMEN:**

Nathaniel Thurston.
 Jefferson Bancroft, '39, '40, '41.
 Cyril French, '36, *'41.

William Livingston, '41.
 Itthamar A. Beard.
 John W. Graves.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Jeremiah P. Jewett.
 John Hadley.
 James Townsend.
 Edward J. Payne.

WARD 2.

John Nesmith, '39, '40.
 Erasmus D. Leavit, '41.
 Joseph W. Mansur, President.
 James Hopkins.

WARD 3.

Nathaniel Critchett, '41.
 Ira Spalding.
 John Mead.
 Asa W. Willoughby.

WARD 4.

John Morrison, '41.
 William Carlton.
 Oliver March.
 Josiah B. French, '36.

WARD 5.

James Patterson.
 Isaac Appleton.
 Josiah Seavey.
 Roswell Douglass.

WARD 6.

James Russell, '36, '37.
 Jonathan Kendall.
 Varnum A. Shed.
 Isaac N. Fitts.

JOHN G. LOCKE, Clerk.**1843.****MAYOR:****NATHANIEL WRIGHT, † '42.****ALDERMEN:**

Harlin Pillsbury, '39, *'40, res'd June.
 Henry C. Johnson.
 Cyril French, '36 *'41, *'42.

S. Spalding, '36, res'd in June.
 Joseph Griffin.
 Charles L. Tilden, *'38, '39.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Daniel Bixby.
 Edward J. Payne, '42.
 Hugh Commiskey.
 Walter Wright, '37, '38, '39.

WARD 2.

Henry J. Baxter, '36, '38, '39.
 John P. Simonds.
 Pliny Lawton.
 Ben Osgood.

WARD 3.

John Mead, '42.
 Willard Brown.
 Ira Spalding, '42.
 Benjamin J. Gerrish.

WARD 4.

Otis Allen.
 Alfred Gilman.
 Oliver March, '42, President.
 William Carlton, '42.

WARD 5.

James Patterson, '42.
 David Bradt.
 John L. Tripp.
 Benjamin F. Holden.

WARD 6.

John B. McAlvin.
 Cyrus Battles.
 Scwall G. Mack.
 Charles F. Mitchell.

JOHN G. LOCKE, Clerk.

1844.**MAYOR:**

ELISHA HUNTINGTON, †'37, †'38, †'39, †'40, †'41.

ALDERMEN:

Henry Smith.
 Selwin Bancroft,
 O. M. Whipple, *'36, *'38, *'39.

Edward F. Watson, '40, '41.
 Joseph Griffin, *'43.
 John Wright.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:**WARD 1.**

Forrest Eaton, '39, '40.
 Gilman N. Nichols.
 Hugh Cummiskey, '43.
 David Healey.

WARD 2.

John P. Simonds, '43.
 Ben Osgood, '43.
 Amos Merriam.
 John Clark, †'36, *'39, President.

WARD 3.

Charles B. Coburn.
 George Choate.
 Isaac Scripture.
 William C. Gray.

WARD 4.

Asa Wetherbee.
 Abner W. Buttrick, '40.
 Horatio G. F. Corliss.
 Charles H. Wilder, '37.

WARD 5.

John L. Tripp, '43.
 David Bradt, '43.
 John Wright.
 Nathaniel Wright, Jr.

WARD 6.

Sewall G. Mack, '43.
 James Russell, '36, '37, '42.
 Jonathan Kendall, 42.
 Gilman Gale.

JOHN G. LOCKE, Clerk.

1845.**MAYOR:**

ELISHA HUNTINGTON, †'37, †'38, †'39, †'40, †'41, †'44.

ALDERMEN:

Henry Smith, *'44.
 Selwin Bancroft, *'44.
 O. M. Whipple, *'36, *'38, *'39, *'44.

Edward F. Watson, '40, '41, '44.
 John C. Dalton.
 Daniel Knapp, '39.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:**WARD 1.**

Gilman N. Nichols, '39.
 Danforth P. Brigham.
 Jonathan Adams.
 Willard C. Welch.

WARD 2.

John P. Simonds, '43, '44.
 Daniel Balch.
 William Brown.
 Daniel S. Richardson, President.

WARD 3.

Isaac Scripture, '44.
 William C. Gray, '44.
 George Choate, '44.
 Hapgood Wright.

WARD 4.

Abner, W. Buttrick, '40 '44.
 Asa Wetherbee, '44.
 Charles H. Wilder, '37, '44.
 Josiah Sawtell.

WARD 5.

Nathaniel Wright, Jr., '44.
 Amos Hyde.
 Edward Sherman.
 James Fenno.

WARD 6.

Gilman Gale, '44.
 John B. McAlvin, '43.
 Samuel Fay, Jr.
 Lorenzo P. Wright.

JOHN G. LOCKE, Clerk.

1846.**MAYOR:****JEFFERSON BANCROFT, '39, '40, *'41, *'42.****ALDERMEN:**

Henry Smith, *'44, *'45.
 Selwin Bancroft, *'44, *'45.
 William C. Gray, '44, '45.
 Joseph Butterfield.

John C. Dalton, '45.
 D. Knapp, '39, *'45, resigned in July
 Isaac Corper, '41, elected in August.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Gilman N. Nichols, '39, '45.
 Danforth P. Brigham, '45.
 Willard C. Welch, '45.
 Thomas S. Hutchinson.

WARD 2.

Daniel Balch, '45.
 William Brown, '45.
 Daniel S. Richardson, ‡ '45, President.
 Zadock Rogers.

WARD 3.

Hapgood Wright, '45.
 Isaac Farrington.
 Joel Powers.
 Franklin Mead.

WARD 4.

Josiah Sawtell, '45.
 Solon Stevens.
 David J. Moody.
 William Fletcher.

WARD 5.

Amos Hyde, '45.
 Horatio G. F. Corliss, '44.
 Jonathan Bowers, '36.
 Charles M. Short.

WARD 6.

Lorenzo P. Wright, '45.
 John L. Fitts, '39, '40.
 Lewis Packard.
 Columbus J. Hubbard.

JOHN G. LOCKE, Clerk.**1847.****MAYOR:****JEFFERSON BANCROFT, '39, '40, *'41, *'42, † '46.****ALDERMEN:**

George Bragdon.
 Joseph Butterfield, *'46.
 Linus Child.
 James Fenno, '45.

Elisha Huntington, ‡ '37, ‡ '38, † '39, † '40,
 † '41, † '44, † '45.
 Sewall G. Mack, '43, '44.
 Stephen Mansur, '36, '39, *'40.
 Josiah Sawtell, '45, '46.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

William Conile.
 James C. Crombie.
 David S. Bachelder,
 Jesse Huse.

WARD 2.

Samuel W. Brown, '40, '41.
 Hannibal Powers.
 William Newman.
 Otis L. Allen.

WARD 3.

Joel Powers, '46.
 Franklin Mead, '46.
 Isaac Farrington, '46.
 Samuel G. Davis.

WARD 4.

Joel Adams, President.
 Horatio Fletcher.
 Solon Stevens, '46.
 Stephen A. Coburn.

WARD 5.

Ignatius Tyler.
 Edward C. Johnson.
 Elihu Gates.
 Charles M. Short, '46.

WARD 6.

Thomas Wentworth.
 Isaac N. Parker.
 John R. Southwick.
 Isaiah Morse.

JOHN G. LOCKE, Clerk.

1848.**MAYOR:****JEFFERSON BANCROFT**, '39, '40, *'41, *'42, †'46, †'47.**ALDERMEN:**

David Dana, '36, '38.

Erastus Douglass, '36, '38.

Jacob Graves, resigned in June.

William Newman, '47.

Gilman N. Nichols, '39, '45, '46.

Daniel S. Richardson, †'45, †'46.

Josiah Sawtell, '45, '46, *'47.

O. M. Whipple, *'36, *'38, *'39, *'45.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

William Conihe, '47.

James C. Crombie, '47.

Jesse Huse, '47.

Gerry Wilson.

WARD 2.

Otis L. Allen, '47.

William H. Flagg.

John Nesmith, '39, '40, '42.

Hannibal Powers, '47.

WARD 3.

Alfred Gilman, '43.

Thomas Hopkinson, '38, '39, President.

Ransom Reed.

Nathaniel Critchett, '41, '42.

WARD 4.

John Avery.

Otis Allen, '43.

Abiel Rolfe.

Horace Howard, '36, '38.

WARD 5.

Ignatius Tyler, '47.

Elihu Gates, '47.

Edward C. Johnson, '47.

Charles M. Short, '46, '47.

WARD 6.

Thomas Wentworth, '47.

Isaac N. Parker, '47.

Jeremiah M. Currier.

Horace Parmenter.

JOHN G. LOCKE, Clerk.**1849.****MAYOR:****JOSIAH B. FRENCH**, '36, '42.**ALDERMEN:**

James B. Francis.

Cyril French, '36, *'41, *'42, *'43.

James H. B. Ayer.

Daniel D. Crombie.

Daniel Carter.

George Brownell, '36, '37, *'38.

Artemas L. Brooks.

Joseph Bedlow, *'40.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

Jesse Huse, '47, '48, resigned in February.

William A. Richardson, elected in March.

Gerry Wilson, '48.

John W. Smith.

Alfred S. Saunders.

WARD 2.

William H. Flagg, '48.

Ivers Taylor.

Isaac S. Morse, resigned.

Ambrose Lawrence.

WARD 3.

Alfred Gilman, '43, '48.

Elisha Davis.

James Dinsmoor.

Andrew C. Wheelock.

WARD 4.

Nathaniel B. Favor.

Caleb Crosby.

Ezekiel Wright.

Waldo A. Fisher.

WARD 5.

Maynard Bragg.

Joshua Decatur.

Abram T. Melvin.

W. W. Morse.

WARD 6.

William Lamson, Jr.

Jeremiah M. Currier, '48.

George S. Wright.

John Aiken, *'37, *'41, President.

GEORGE A. BUTTERFELD, Clerk.

1850.**MAYOR:****JOSIAH B. FRENCH, '36, '42, †'49.****ALDERMEN:**

James H. B. Ayer, *'49.
 Joseph Bedlow, *'40, *'49.
 Daniel D. Crombie, *'49.
 James B. Francis, *'49.

Philip Hardy.
 John Mixer, '36, '38.
 Josiah G. Peabody.
 James Townsend, '42.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

John W. Smith, '49.
 Daniel R. Kimball.
 James Watson.
 Jonathan Smothers.

WARD 2.

Ivers Taylor, '49, President.
 George Gardner.
 Samuel Lawrence, 2d.
 Samuel J. Varney.

WARD 3.

Jonathan Page.
 John Tripp.
 Fordyce Coburn.
 Joshua Merrill.

WARD 4.

Abner W. Buttrick, '40, '44, '45.
 Caleb Crosby, '49.
 Benjamin Goddard.
 Nathaniel B. Favor, '49.

WARD 5.

George P. Elliot.
 William Fiske, '37, '38, '41.
 George W. Worthen.
 Maynard Bragg, '49.

WARD 6.

Albert Mallard.
 Stephen P. Sargent.
 George S. Wright, '49.
 Wm. Lampson, Jr., '49, resigned in May

GEO. A. BUTTERFIELD, Clerk, res'd May. WM. LAMSON, JR., elected May.**1851.****MAYOR:****JAMES H. B. AYER, *'49, *'50.****ALDERMEN:**

William Fiske, '37, '38, '41, '50.
 Ambrose Lawrence, '49.
 James Townsend, '42, *'50.
 Philip Hardy, *'50.

William North, '37.
 Abiel Rolfe, '48.
 Lucius A. Cutler.
 Joshua Converse, 40.

THOMAS ORDWAY, City Clerk.**COMMON COUNCIL:****WARD 1.**

James Watson, '50.
 Jonathan Smothers, '50.
 Charles B. Coburn, '44.
 Stephen Moar.

WARD 2.

Linus Child, *'47.
 George Gardner, '50, President.
 Samuel J. Varney, '50.
 Zachariah B. Caverly.

WARD 3.

Fordyce Coburn, '50.
 William Twichell.
 Darius C. Brown.
 Benjamin C. Sargeant.

WARD 4.

Benjamin Goddard, '50.
 Richard Dennis.
 Holland Streeter.
 Solomon D. Emerson.

WARD 5.

George P. Elliot, '50.
 Edward Fifield.
 John N. Ford.
 Theodore H. Sweetser.

WARD 6.

George W. Worthen, '50.
 George W. Jones, died in September.
 Stephen P. Sargent, '50.
 Albert Mallard, '50.

WILLIAM LAMSON, JR., Clerk,

1852.**MAYOR:**

ELISHA HUNTINGTON, †'37, †'38, †'39, †'40, †'41, †'44, †'45, *'47.

ALDERMEN:

Joseph Bedlow, *'40, *'49, *'50.

Joseph M. Bullens.

Samuel Burbank, '40, '41.

Joseph B. V. Coburn.

Wm. Fiske, '37, '38, '41, '50, *'51.

William North, '37, *'51.

Alpha Stevens.

Samuel J. Varney, '50, '51.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:**WARD 1.**

Rufus Rogers.

John C. Smith.

Jeremiah Clark.

Paul Hill.

WARD 2.

Paul Perkins.

Milton Bonney.

William Hovey.

Zachariah B. Caverly, '51.

WARD 3.

Darius C. Brown, '51.

William Twitchell, '51.

Benjamin C. Sargeant, '51, President.

Michael B. Caswell.

WARD 4.

Holland Streeter, '51.

Elbridge Livingston.

Abram French.

Willard Minot.

WARD 5.

Edward Fifield, '51.

Phineas Whiting, '41.

George W. Patterson.

Jonathan Kendall, '42, '44.

WARD 6.

Leonard W. Jaquith.

Seth Pooler.

Caleb G. Weaver.

William C. Parker.

WILLIAM LAMSON, JR., Clerk.

1853.**MAYOR:**

SEWALL G. MACK, '43, '44, *'47.

ALDERMEN:

Elisha Huntington, †'37, †'38, †'39, †'40, †'41, †'44, †'45, *'47, †'52.

Samuel K. Hutchinson.

Stephen Mansur, '36, '39, *'40, *'47.

Joseph B. V. Coburn, *'52.

Ira Spalding, '42, '43.

Joseph M. Bullens, *'52.

Alpha Stevens, *'52.

Joseph White.

THOMAS ORDWAY, City Clerk.

COMMON COUNCIL:**WARD 1.**

Rufus Rogers, '52.

John C. Smith, '52.

Marcus A. Thomas.

James Cook, '36.

WARD 2.

Paul Perkins, '52.

Milton Bonney, '52.

George G. Bumpus.

George W. Stanley.

WARD 3.

Michael B. Caswell, '52.

Calvin Philbrick.

Leonard Brown.

Henry H. Wilder.

WARD 4.

Abram French, '52.

Henry C. Howe.

Joseph S. Grush.

Samuel K. Pickering.

WARD 5.

George W. Patterson, '52.

William A. Richardson, '49, President.

Patrick Conlan.

Jonathan Bowers.

WARD 6.

Caleb G. Weaver, '52.

William C. Parker, '52.

George F. Woods.

C. F. Blanchard.

WILLIAM LAMSON, JR., Clerk.

1854.**MAYOR:****SEWALL G. MACK, '43, '44, *'47, †'53.****ALDERMEN:**

Elisha Huntington, †'37, †'38, †'39, †'40, Joseph White, *'53.
 †'41, †'44, †'45, *'47, †'52, *'53. Horatio Fletcher, '47.
 J. B. V. Coburn, *'52, *'53, res'd in Jan. C. F. Blanchard, '53.
 Samuel K. Hutchinson, *'53. Charles Sperry.
 Ira Spalding, '42, '43, *'53.

WILLIAM LAMSON, JR. City Clerk.**COMMON COUNCIL:****WARD 1.**

John C. Smith, '52, '53.
 Paul Hill, '52.
 Marcus A. Thomas, '53.
 Thomas Lennon.

WARD 2.

George W. Stanley, '53.
 William H. Gage.
 Amos A. Taylor.
 William H. Bradley.

WARD 3.

Calvin Philbrick, '53.
 Leonard Brown, '53, declined.
 Darius C. Brown, '51, '52, elected.
 Henry H. Wilder, '53.
 Peter O. C. Frawley.

WARD 4.

Henry C. Howe, '53.
 Joseph S. Grush, '53.
 Samuel K. Pickering, '53.
 Hubbard Wilson.

WARD 5.

Wm. A. Richardson, '49, †'53, President.
 Jonathan Bowers, '53.
 Patrick Conlan, '53.
 John C. Woodward.

WARD 6.

George F. Woods, '53.
 Charles S. Eastman.
 Levi H. Straw.
 William P. Webster.

LEONARD BROWN, Clerk.**1855.****MAYOR:****AMBROSE LAWRENCE, '49, '51.****ALDERMEN:**

Wm. Fiske, '37, '38, '41, '50, *'51, *'52. Andrew T. Nute.
 Artemas L. Brooks, *'49. Abner Frost.
 Daniel Woodward. William S. Johnson.
 Lorenzo G. Howe. Shadrach R. Brackett.

WILLIAM LAMSON, JR., City Clerk.**COMMON COUNCIL:****WARD 1.**

Maynard Bragg, '49, '50.
 Aaron B. Young.
 Augustus B. Roby.
 George L. Harris.

WARD 2.

William G. Morse.
 George K. Paul.
 Mark H. Cook.
 Joseph A. Patten.

WARD 3.

Alfred Gilman, '43, '48, '49, President.
 Daniel Hurd.
 Theodore Warren.
 Stephen K. Fielding.

WARD 4.

Joshua W. Daniels.
 John Bennett.
 Alanson Folsom.
 Francis H. Nourse.

WARD 5.

John C. Woodward, '54.
 Stephen Bartlett.
 Jonathan Johnson.
 Oliver P. Rand.

WARD 6.

Levi H. Straw, '54.
 William T. Whitten.
 Lucien P. Stacy.
 James M. Moore.

LEONARD BROWN, Clerk.

1856.**MAYOR:**

ELISHA HUNTINGTON, ‡ '37, ‡ '38, † '39, † '40, † '41, † '44, † '45, * '47,
† '52, * '53, * '54.

ALDERMEN:

Edward Tuck.
Samuel Burbank, '40, '41, * '52.
Charles B. Coburn, '44.
William P. Webster, '54.
Hapgood, Wright, '45, '46.

Charles H. Wilder, '37, '44, '45.
O. J. Conant, resigned in March.
James H. Rand.
Jonathan Johnson, elected in June.

WILLIAM LAMSON, JR., City Clerk.

COMMON COUNCIL:**WARD 1.**

Enos O. Kingsley.
Abiel Pevey.
David M. Collins.
Marshall E. Thompson.

WARD 2.

Isaac Hinckley.
Seth Gage.
Peter Flanders, Jr.
Leonard F. Jewell.

WARD 3.

David Rogers.
Benj. C. Sargeant, '51, ‡ '52, President.
Henry H. Carroll.
Peter Powers.

WARD 4.

Francis H. Nourse, '55.
Alden B. Buttrick.
Holland Streeter, '51, '52.
James Sands.

WARD 5.

Frederick Holton.
Isaac Place.
Albert Wheeler.
Abiel Rolfe, '48, * '51.

WARD 6.

Eliphalet Hills.
Jonathan P. Folsom.
James K. Fellows, '37.
John K. Chase.

JAMES J. MAGUIRE, Clerk.

1857.**MAYOR:**

STEPHEN MANSUR, '36, '39, * '40, * '47, * '53.

ALDERMEN:

Andrew T. Nute, * '55.
John C. Woodward, '54, '55.
Jonathan Smothers, '50, '51.
Samuel W. Stickney.

John B. Tuttle.
Francis H. Nourse, '55, '56.
Jonathan Johnson, '55, * '56.
John Nesmith, '39, '40, '42, '48.

WILLIAM LAMSON, JR., City Clerk.

COMMON COUNCIL:**WARD 1.**

Abiel Pevey.
Stephen T. Stanley.
Charles A. Welch.
George F. Scribner.

WARD 2.

William G. Morse, '55.
William D. Vinall.
Temple Tebbetts.
James M. Howe.

WARD 3.

Benjamin C. Sargeant, '51, ‡ '52, ‡ '56.
David Rogers, '56.
Henry H. Carroll, '56.
Nathan Allen.

WARD 4.

Caleb Crosby, '49, '50.
John F. Howe.
John C. Jepson.
Alanson Nichols.

WARD 5.

Frederick Holton, '56, President.
William H. Wiggin.
William Goodale.
Charles Hubbard.

WARD 6.

Erastus Boyden.
Jonathan Kimball.
Robert J. Garrett.
William Nichols.

HENRY A. LORD, Clerk.

1858.**MAYOR:**

ELISHA HUNTINGTON, †'37, †'38, †'39, †'40, †'41, †'44, †'45, *'47, †'52, *'53, *'54, †'56.

ALDERMEN:

Sewall G. Mack, '43, '44, *'47, †'53, †'54. Joseph M. Dodge, '37.
 Samuel W. Stickney, *'57. Harvey Silver.
 Abiel Pevey, '56, '57. Albert Wheeler, '56.
 Jeremiah P. Jewett, 42. Edwin A. Alger.

JOHN H. McALVIN, City Clerk.

COMMON COUNCIL:**WARD 1.**

Charles Wilkins.
 John M. Maynard.
 John E. Webb.
 William Barnard.

WARD 2.

Edward Tuck, *'56.
 William P. Webster, '54, *'56.
 Andrew Blood.
 William F. Salmon.

WARD 3.

Benjamin C. Sargeant, '51, †'52, †'56, '57, President.
 Hanover Dickey.
 Joseph A. Brabrook.
 Benjamin S. Butterworth.

WARD 4.

Enoch P. Young.
 Zephaniah Goward.
 Jesse Blake.
 John F. Howe, '57.

WARD 5.

Willard Dudley.
 Samuel T. Manahan.
 Isaac Page.
 John Avery, 2d.

WARD 6.

William Nichols, '57.
 Alpha B. Farr, resigned in January.
 Leonard Brown, '53, '54, elected in Feb.
 Erastus Boyden, '57.
 James H. Rand, *'56, resigned in May.
 Eben'r Burgess, elected in June.

GEORGE GARDNER, Clerk.

1859.**MAYOR:**

JAMES COOK, '36, '53.

ALDERMEN:

Lorenzo G. Howe, *'55. John F. Howe, '57, '58.
 Samuel J. Varney, '50, 51, *'52. Joshua Converse, '40, *'51, res'd in April.
 Paul Hill, '52, '54. J. P. Folsom, '56, resigned in April.
 Ambrose Lawrence, '49, '51, †'55, re- Edward Tuck, *'56, '58, elected in May.
 signed in April. Samuel T. Manahan, '58, elected in May.
 Darius C. Brown, '51, '52. Jonathan Ladd, elected in May.

JOHN H. McALVIN, City Clerk.

COMMON COUNCIL:**WARD 1.**

John E. Webb, '58.
 Charles Wilkins, '58.
 William Barnard, '58.
 William D. Blanchard.

WARD 2.

W. P. Webster, '54, *'56, '58, President.
 William F. Salmon, '58.
 James M. Howe, '57.
 David Nichols.

WARD 3.

George Hobson.
 Asahel D. Puffer.
 John Willoughby.
 Benjamin S. Butterworth, '58.

WARD 4.

Caleb Crosby, '49, '50, '57.
 Jesse Blake, '58.
 George W. Partridge.
 George W. Young.

WARD 5.

Horatio G. F. Corliss, '44, '46.
 Luther B. Morse.
 Josiah G. Peabody, *'50.
 William Goodale, '57.

WARD 6.

Charles A. Stott.
 Levi Sprague.
 Ebenezer Burgess, '58.
 Leonard Brown, '53, '54, '58.

GEORGE GARDNER, Clerk.

1860.**MAYOR:****BENJAMIN C. SARGEANT**, '51, ‡ '52, ‡ '56, '57, ‡ '58.**ALDERMEN:**

Edward F. Watson, '40, '41, *'44, *'45.

Lorenzo G. Howe, *'55, *'59.

James Watson, '50, '51.

William G. Morse, '55, '57.

Henry H. Wilder, '53, '54.

Abner Frost, *'55.

Samuel T. Manahan, '58, *'59.

William S. Gardner.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Benjamin S. Ireson.

Enoch Quimby.

John P. Slocum.

Amos H. Foster.

WARD 2.

Henry P. Clough.

Alfred S. Saunders, '49.

Wm. F. Salmon, '58, '59, President.

Joseph L. Sargent.

WARD 3.

George Hobson, '59.

Josiah B. Fielding.

Henry P. Perkins.

Hocum Hosford.

WARD 4.

George W. Partridge, '59.

George W. Young, '59.

Morrill M. Bohonan.

Caleb Crosby, '49, '50, '57, '59.

WARD 5.

Josiah G. Peabody, *'50, '59.

Sullivan L. Ward.

George F. Morey.

William H. Lamson.

WARD 6.

William Nichols, '57, '58.

Samuel T. Lancaster.

Charles A. Stott, '59.

Foster Nowell.

GEORGE GARDNER, Clerk.**1861.****MAYOR:****BENJAMIN C. SARGEANT**, '51, ‡ '52, ‡ '56, '57, ‡ '58, ‡ '60.**ALDERMEN:**

Samuel T. Manahan, '58, *'59, *'60.

Jonathan P. Folsom, '56, *'59.

James Watson, '50, '51, *'60.

William G. Morse, '55, '57, *'60.

Hocum Hosford, '60.

Aldis L. Waite.

David Whitney, declined acceptance.

Sager Ashworth, elected in May.

William S. Gardner, *'60.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Frank E. Jewett.

M. Gilbert Perkins.

Jacob Baron.

William D. Blanchard, '59.

WARD 2.

Alfred S. Saunders, '49, '60.

Joseph L. Sargent, '60.

Henry P. Clough, '60.

Henry S. Orange.

WARD 3.

William L. North, President.

George W. Norris.

Henry P. Perkins, '60.

James G. Morrison.

WARD 4.

Joseph Cater.

Joseph B. Keyes.

Morrill M. Bohonan, '60.

Abel M. Ayer.

WARD 5.

Sullivan L. Ward, '60.

Samuel Beck.

William H. Parker.

George F. Morey, '60.

WARD 6.

Samuel T. Lancaster, '60.

Foster, Nowell, '60.

Elon A. Sanborn.

George E. Dana.

GEORGE GARDNER, Clerk.

1862.**MAYOR:****HOCUM HOSFORD, '60, *'61.****ALDERMEN:**

Mertoun C. Bryant.
 Edwin A. Alger, *'58.
 James B. Francis, *'49, *'50.
 William A. Burke.

Isaac F. Scripture.
 Aldis L. Waite, *'61.
 Albert Wheeler, '56, *'58.
 Jona. P. Folsom, '56, *'59, *'61.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1**

Amos D. Wright.
 Frank E. Jewett, '61.
 Horatio G. Burgess.
 Charles F. Hard.

WARD 2.

Benedict O. Carpenter.
 William T. McNeill.
 Lorenzo G. Howe, *'55, *'58, *'60.
 Henry S. Orange, '61.

WARD 3.

George W. Norris, '61.
 Edmund D. Fletcher.
 Everett W. French.
 John Quinn.

WARD 4.

Joseph B. Keyes, 61.
 George Runels.
 John Pettingell.
 Hubbard Willson, '54.

WARD 5.

Rollin C. Downs.
 Albert Mallard, '50, '51.
 Edward Fifield, '51, '52.
 Cleveland J. Cheney.

WARD 6.

George F. Richardson, President.
 Albion J. Dudley.
 Elon A. Sanborn, '61.
 Frederiek Frye.

GEORGE GARDNER, Clerk.**1863.****MAYOR:****HOCUM HOSFORD, '60, *'61, † '62.****ALDERMEN:**

James B. Francis, *'49, *'50, *'62.
 Edwin A. Alger, *'58, *'62.
 Abiel Pevey, '56, '57, *'58.
 William A. Burke, *'62.

Isaac F. Scripture, *'62.
 Otis Allen, '43, '48.
 Albert Wheeler, '56, *'58, *'62.
 William Nichols, '57, '58, '60.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Charles F. Hard, '62.
 Amos D. Wright, '62.
 John Cosgrove.
 William A. Wright.

WARD 2.

George F. Sawtell.
 Henry S. Orange, '61, '62.
 Hugh McEvoy.
 Nathaniel Stearns.

WARD 3.

Everett W. French, '62.
 Fordyce Coburn, '50, '51.
 Edmund D. Fletcher, '62.
 John Quinn, '62.

WARD 4.

Atwell F. Wright.
 Josiah Gates.
 William Stafford.
 John McCann.

WARD 5.

James C. Ayer.
 Charles W. Saunders.
 Cyrus H. Latham.
 John E. Downs.

WARD 6.

George F. Richardson, † '62, President.
 Albion J. Dudley, '62.
 Benedict O. Carpenter, '62.
 Frederiek Frye, '62.

GEORGE GARDNER, Clerk.

. 1864.**MAYOR:****HOCUM HOSFORD, '60, * '61, † '62, † '63.****ALDERMEN:**

William S. Southworth.	George W. Norris, '61, '62.
James B. Francis, *'49, *'50, *'62, *'63.	George Runels, '62.
Dana B. Gove.	Cyrus H. Latham, '63.
William T. McNeill, '62.	George F. Richardson, † '62, † '63.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Alden B. Watson.
 Lewis L. Perrin.
 Frederick S. Tukey.
 John Cosgrove, '63.

WARD 2.

George Ripley, President.
 Andrew F. Jewett.
 Artemas S. Young.
 Hoyt W. Hilton.

WARD 3.

Samuel N. Wood.
 Charles W. Dodge.
 Joseph S. Pollard.
 James G. Morrison, '61.

WARD 4.

Atwell F. Wright, '63.
 Daniel Churchill.
 William W. Sherman.
 Francis Jewett.

WARD 5.

John E. Downs, '63.
 Thomas G. Gerrish, resigned June 14.
 Charles Hubbard, '57.
 Cleveland J. Cheney, '62.

WARD 6.

Levi Sprague, '59.
 Tobias L. P. Lamson.
 Addison Putnam.
 Albion J. Dudley, '62, '63.

GEORGE GARDNER, Clerk.**1865.****MAYOR:****JOSIAH G. PEABODY, * '50, '59, '60.****ALDERMEN:**

Ew'd F. Watson, '40, '41, *'44, *'45, *'60.	Henry H. Wilder, '53, '54, *'60.
George W. Norris, '61, '62, *'64.	Josiah Gates, '63.
Dana B. Gove, *'64.	Cyrus H. Lathan, '63, *'64.
William T. McNeill, '62, *'64.	William Brown, '45, '46.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Alden B. Watson, '64.
 Lewis L. Perrin, '64.
 George N. Osgood.
 John R. Southwick, '47.

WARD 2.

George Ripley, † '64, President.
 Andrew F. Jewett, '64.
 Julian V. Keyes.
 Chester W. Rugg.

WARD 3.

Joseph S. Pollard, '64.
 Charles W. Dodge, '64.
 Edward C. Rice.
 Frederick T. North.

WARD 4.

Francis Jewett, '64.
 Benjamin Walker.
 Benjamin L. Googins.
 John Pearson.

WARD 5.

Charles Hubbard, '57, '64.
 James Kent.
 Simeon D. Osterhoudt.
 James Foster.

WARD 6.

Tobias L. P. Lamson, '64.
 Luke C. Dodge.
 Gustavus A. Gerry.
 James M. Moore, '55.

GEORGE GARDNER, Clerk.

1866.**MAYOR:****JOSIAH G. PEABODY, ***'50, '59, '60, †'65.**ALDERMEN:**

Samuel A. Brown.
 Albert B. Plimpton.
 John R. Southwick, '47, '65.
 Joseph L. Sargent, '60, '61.

Charles W. Dodge, '64, '65.
 Josiah Gates, '63, *'65.
 Henry M. Hooke.
 Albion J. Dudley, '62, '63, '64.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

William A. Hodge.
 William A. Wright, '63.
 Jacob Baron, '61.
 Rollin C. Downs, '62.

WARD 2.

Andrew F. Jewett, '64, '65.
 George H. Whitmore.
 Julian V. Keyes, '65.
 Chester W. Rugg, '65.

WARD 3.

Edward C. Rice, '65.
 Frederick T. North, '65.
 James N. Pinkham.
 Oliver W. Smith.

WARD 4.

Benjamin L. Googins, '65.
 Alfred Scott.
 Thomas F. Burgess.
 Benjamin Walker, '65.

WARD 5.

Robert H. Butcher.
 John T. Lee.
 George L. Huntoon.
 Jonathan Johnson, '55, *'56, *'57.

WARD 6.

Gustavus A. Gerry, '65, President.
 Luke C. Dodge, '65.
 Charles A. Kimball.
 Alfred H. Chase.

GEORGE GARDNER, Clerk.**1867.****MAYOR:****GEORGE F. RICHARDSON, †'62, †'63, *'64.****ALDERMEN:**

Charles B. Coburn, '44, '51, *'56.
 Hocom Hosford, '60, *'61, †'62, †'63, †'64,
 John R. Southwick, '47, '65, *'66.
 Joseph L. Sargent, '60, '61, *'66.
 Edward C. Rice, '65, '66.

Abner W. Buttrick, '40, '44, '45, '50;
 died June 29, '67.
 Wm. E. Livingston, elected Sept. 9, '67.
 William H. Parker, '61.
 Albion J. Dudley, '62, '63, '64, *'66.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

John Shepard.
 Calvin Sawtell.
 Foster Wilson.
 M. Gilbert Perkins, '61.

WARD 2.

Gustavus A. Gerry, '65, †'66, President.
 Ruel J. Walker.
 William Dobbins.
 Silas Tyler, Jr.

WARD 3.

Jona. P. Folsom, '56, *'59, *'61, *'62.
 Frederick T. North, '65, '66.
 Samuel D. Prescott.
 Nathan M. Wright.

WARD 4.

John B. Hunt.
 John Q. A. Hubbard.
 Alfred Scott, '66.
 Thomas F. Burgess, '66.

WARD 5.

George L. Huntoon, '66.
 George S. Cheney.
 James Foster, '65.
 John T. Lee, '66.

WARD 6.

Alfred H. Chase, '66.
 James Lawton.
 John N. Pierce, Jr.
 Foster Nowell, '60, '61, res'd May 14, '67.
 William Kittredge, elected Sept. 9, '67.

GEORGE GARDNER, Clerk.

1868.**MAYOR:****GEORGE F. RICHARDSON**, ‡ '62, ‡ '63, *'64, † '67.**ALDERMEN:**

Charles B. Coburn, '44, '51, *'56, *'67.

Edward C. Rice, '65, '66, *'67.

Francis Jewett, '64, '65.

William E. Livingston, *'67.

John M. Pevey, resigned in July.

Frederic Frye, '62, '63.

Charles L. Hildreth, elected in September.

Albion J. Dudley, '62, '63, '64, *'66, *'67.

Silas Tyler, Jr., '67.

JOHN H. McALVIN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Calvin Sawtell, '67.

John Shepard, '67.

John F. Merrill.

Frederic T. Greenhalge.

WARD 2.

Francis D. Munn.

Joseph A. Patten, '55.

Ruel J. Walker, '67.

Henry S. Orange, '61, '62, '63.

WARD 3.

George W. Badger.

Samuel D. Prescott, '67.

William Walker.

Albert A. Haggett.

WARD 4.

William H. Anderson.

John Q. A. Hubbard, '67.

Charles T. Crane.

John B. Hunt, '67.

WARD 5.

Edwin Lamson.

George S. Cheney, '67.

William Kelley.

Ethan N. Spencer.

WARD 6.

John N. Pierce, Jr., '67.

James Lawton, '67.

Francis Brown.

Alfred H. Chase, '66, '67, President.

GEORGE GARDNER, Clerk.**1869.****MAYOR:****JONATHAN P. FOLSOM**, '56, *'59, *'61, *'62, '67.**ALDERMEN:**

Francis Jewett, '64, '65, *'68.

Hapgood Wright, '45, '46, *'56.

Henry H. Wilder, '53, '54, *'60, '65.

John Q. A. Hubbard, '67, '68.

Charles L. Hildreth, *'68.

George S. Cheney, '67, '68.

Cyrus H. Latham, '63, *'64, *'65.

Charles A. Stott, '59, '60.

JOHN H. McALVIN, City Clerk. Resigned March 15, 1869.**SAMUEL A. McPHETRES**, City Clerk. Elected March 15, 1869.**COMMON COUNCIL:****WARD 1.**

Frederic T. Greenhalge, '68.

John H. Durgin, Jr.

Patrick Keyes.

Benjamin Patch.

WARD 2.

Joseph A. Patten, '55, '68.

Phineas Jones.

Francis D. Munn, '68.

Amos Sanborn.

WARD 3.

George W. Badger, '68.

Albert A. Haggett, '68.

William Walker, '68.

George E. Pinkham.

WARD 4.

William H. Anderson, '68, President.

Simeou G. Lyford.

Henry P. Carter.

Epaphras A. Hill.

WARD 5.

William Kelley, '68.

Willard A. Brown.

William O. Fiske.

Edwin Lamson, '68.

WARD 6.

Francis Brown, '68.

Alpha B. Farr, '58.

Lucian P. Stacy, '55.

William Kittredge, '67.

GEORGE GARDNER, Clerk.

1870.**MAYOR:****JONATHAN P. FOLSOM**, '56, *'59, *'61, *'62, '67, †'69.**ALDERMEN:**

Edward F. Sherman.

Frank F. Battles.

Charles L. Hildreth, *'68, *'69.

Amos B. French.

Hapgood Wright, '45, '46, *'56, *'69.

John Q. A. Hubbard, '67, '68, *'69.

Addison Putnam, 64.

Charles A. Stott, '59, '60, *'69.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John H. Durgin, Jr., '69.

Benjamin Patch, '69.

Patrick Keyes, '69.

Samuel G. Ladd.

WARD 2.

Phineas Jones, '69.

John L. Moulton.

Patrick Cummiskey.

David G. Skillings.

WARD 3.

Albert A. Haggett, '68, '69, President.

Henry P. Perkins, '60, '61.

Hocum Hosford, '60, *'61, †'62, †'63,

†'64, *'67, declined.

Matthew Donovan.

John L. Meadowcroft, elected Jan. 24.

WARD 4.

Epaphras A. Hill, '69.

Henry P. Carter, '69.

Simeon G. Lyford, '69.

Michael Corbett.

WARD 5.

William O. Fiske, '69.

Willard A. Brown, '69.

James D. Hartwell.

Jeremiah Crowley.

WARD 6.

Alpha B. Farr, '58, '69.

William Kittredge, '67, '69.

Lucian P. Stacy, '55, '69.

John Stott.

GEORGE GARDNER, Clerk.**1871.****MAYOR:****EDWARD F. SHERMAN**, *'70.**ALDERMEN:**

Frank F. Battles, *'70.

William F. Salmon, '58, '59, †'60.

John W. Smith, '49, '50.

Amos B. French, *'70.

Albert A. Haggett, '68, '69, †'70.

Henry C. Howe, '53, '54.

Frederick Ayer.

Addison Putnam, '64, *'70.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John H. Durgin, Jr., '69, '70.

Samuel G. Ladd, '70.

Francis N. J. Haviland.

Joel Knapp.

WARD 2.

William Dobbins, '67.

John L. Moulton, '70.

Patrick Cummiskey, '70.

Amos A. Blanchard.

WARD 3.

Henry P. Perkins, '60, '61, '70, President.

John L. Meadowcroft, '70.

Horace Ela.

Julius C. Jockow.

WARD 4.

Benjamin Walker, '65, '66.

Michael Corbett, '70.

Francis H. Chandler.

Charles T. Goddard.

WARD 5.

Jeremiah Crowley, '70.

Crawford Burnham.

Henry C. Church.

Patrick Lynch.

WARD 6.

Leonard Brown, '53, '54, '58, '59.

John Stott, '70.

Abel T. Atherton.

Nathaniel C. Sanborn.

GEORGE GARDNER, Clerk.

1872.**MAYOR:****JOSIAH G. PEABODY**, *'50, '59, '60, †'65, †'66.**ALDERMEN:**

Henry C. Howe, '53, '54, *'71.

Alexander G. Cumnock.

Benjamin Patch, '69, '70.

Gustavus A. Gerry, '65, †'66, †'67.

Frederick T. North, '65, '66, '67.

Benjamin Walker, '65, '66, '71.

William Kelley, '68, '69.

Alpha B. Farr, '58, '69, '70.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John E. Webb, '58, '59.

Alonzo F. Caswell.

Southwell Farrington.

True P. Jordan.

WARD 2.

Leonard Brown, '53, '54, '58, '59, '71.

Amos A. Blanchard, '71.

Joseph S. Brown.

Earl A. Thissell.

WARD 3.

Henry P. Perkins, '60, '61, '70, †'71, Pres.

Horace Ela, '71.

Julius C. Jockow, '71.

Charles F. Tilton.

WARD 4.

Nathaniel P. Favor.

Nathan W. Frye.

Henry A. Lord.

Alonzo L. Russell.

WARD 5.

Crawford Burnham, '71.

Charles F. Belden.

Luther J. Eames.

William Shepard.

WARD 6.

Abel T. Atherton, '71.

Nathaniel C. Sanborn, '71.

Samuel M. Chase.

Julian Talbot.

GEORGE GARDNER, Clerk.**1873.****MAYOR:****FRANCIS JEWETT**, '64, '65, *'68, *'69.**ALDERMEN:**

Jonathan P. Folsom, '56, *'59, *'61, *'62, '67, †'69, †'70.

George Runels, '62, *'64.

Edward Tuck, *'56, '58, *'59, declined.

Isaac Farrington, '46, '47, declined.

William Dobbins, '67, '71, elected Jan. 14.

Charles A. F. Swan, elected January 14.

Jacob H. Sawyer.

Jeremiah Crowley, '70, '71.

Alpha B. Farr, '58, '69, '70, *'72.

George Stevens.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John E. Webb, '58, '59, '72.

Alonzo F. Caswell, '72.

Frank Brady.

Stephen J. Smiley.

WARD 2.

Joseph S. Brown, '72.

Earl A. Thissell, '72.

Daniel Stickney.

Edward P. Woods.

WARD 3.

Albert A. Haggett, '68, '69, †'70, *'71, Pres.

Charles F. Tilton, '72, resigned March 1.

William Bass.

James Owens.

James A. Loughlin, elected April 8.

WARD 4.

Atwell F. Wright, '63, '64.

Nathaniel P. Favor, '72.

Nathan W. Frye, '72.

Henry A. Lord, '72.

WARD 5.

Robert H. Butcher, '66.

Charles F. Belden, '72.

Jared P. Maxfield.

George Smith.

WARD 6.

Nathaniel C. Sanborn, '71, '72.

Samuel M. Chase, '72.

George W. S. Hurd.

Artemas S. Tyler.

GEORGE GARDNER, Clerk.

1874.

MAYOR:

FRANCIS JEWETT, '64, '65, *'68, *'69, †'73.

ALDERMEN:

Jeremiah Crowley, '70, '71, *'73.	Jonathan Kendall, '42, '44, '52.
Benjamin Walker, '65, '66, '71, *'72.	George L. Huntton, '66, '67.
Alonzo F. Caswell, '72, '73.	Nathaniel C. Sanborn, '71, '72, '73.
Joseph S. Brown, '72, '73.	George Stevens, *'73.

SAMUEL A. McPHETRES, City Clerk.

COMMON COUNCIL:

WARD 1.

Charles A. Welch, '57.
 Frank Brady, '73.
 Stephen J. Smiley, '73.
 Charles H. Harvey.

WARD 2.

Daniel Stiekney, '73.
 Edward P. Woods, '73.
 Charles J. Eastman.
 Edward E. Reed.

WARD 3.

Julius C. Jockow, '71, '72.
 James Owens, '73.
 James A. Loughlin, '73.
 George W. Tilton.

WARD 4.

Charles T. Goddard, '71.
 Nathan W. Frye, '72, '73, President.
 Jacob H. Sawyer, *'73.
 Julian A. Richardson.

WARD 5.

Jared P. Maxfield, '73.
 John B. Lyford,
 Samuel P. Marin.
 John Seott.

WARD 6.

George W. S. Hurd, '73.
 Joel A. Abbott.
 Thomas Carolin.
 Jason Fuller.

GEORGE GARDNER, Clerk, died May 29.
 DAVID CHASE, Clerk, elected June 4.

1875.

MAYOR:

FRANCIS JEWETT, '64, '65, *'68, *'69, †'73, †, '74.

ALDERMEN:

Benjamin Walker, '65, '66, '71, *'72, *'74.	Hapgood Wright, '45, '46, *'56, *'69.
Jacob Rogers.	James Owens, '73, '74.
John A. Goodwin.	Alden B. Richardson.
Joseph S. Brown, '72, '73, *'74.	Samuel A. Chase.

SAMUEL A. McPHETRES, City Clerk.

COMMON COUNCIL:

WARD 1.

Charles A. Welch, '57, '74.
 Charles H. Harvey, '74.
 John F. Howard.
 John W. Welch.

WARD 2.

Earl A. Thissell, '72, '73.
 Edward E. Reed, '74.
 William A. Read.
 Leavitt R. J. Varnum.

WARD 3.

Albert A. Hagggett, '68, '69, †'70, *'71.
 George W. Tilton, '74. [†'73, Pres.
 Charles Cowley.
 Thomas R. Garity.

WARD 4.

Josiah Butler.
 Francis Carl.
 Edward P. Dennis.
 Edward Stockman.

WARD 5.

James D. Hartwell, '70.
 John B. Lyford, '71.
 Orford R. Blood.
 Charles W. Sleeper.

WARD 6.

Joel A. Abbott, '74.
 Thomas Carolin, '74.
 Jason Fuller, '74.
 Albert D. Wright.

DAVID CHASE, Clerk.

1876.**MAYOR:****CHARLES A. STOTT, '59, '60, *'69, *'70.****ALDERMEN:**

Jacob Rogers, *'75.

John A. Goodwin, *'75. [†'73, ‡'75.

Albert A. Haggett, '68, '69, ‡'70, *'71,

Charles F. Belden, '72, '73.

Henry A. Hildreth.

George E. Stanley.

Francis Carll, '75.

William H. Wiggins, '57.

SAMUEL A. McPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John W. Welch, '75.

Lewis Stiles.

Daniel W. Manning.

David M. Collins, '56, declined.

John F. Howard, '75, elected January 11.

WARD 2.

Leavitt R. J. Varnum, '75.

Charles E. Hallowell.

Charles Callahan.

William A. Read, '75.

WARD 3.

Charles Cowley, '75.

Charles H. Kimball.

Charles Runels.

James Howard, died after election.

William H. Grady, elected January 11.

WARD 4.

Edward Stockman, '75, resigned May 23.

Gardner W. King.

Stephen H. Jones.

Charles D. Starbird.

James W. Bennett, elected June 22.

WARD 5.

Orford R. Blood '75.

John F. Kimball, President from May 23.

Charles H. Hanson.

M. Gilbert Perkins, '61, '67.

WARD 6.

Edwin Sanborn.

Benjamin C. Dean, Pres., resig'd May 23.

Charles H. Walker.

John J. Pickman.

Willis Farrington, elected June 22.

DAVID CHASE, Clerk.**1877.****MAYOR:****CHARLES A. STOTT, '59, '60, *'69, *'70, †'76.****ALDERMEN:**

Jeremiah Crowley, '70, '71, *'73, *'74.

Horace R. Barker.

George E. Stanley, *'76.

Charles H. Kimball, '76.

George P. Walker.

Orford R. Blood, '75, '76, seat vacated.

Stephen B. Puffer, declined el. January 2.

Robert Park.

George E. Pinkham, '69.

SAMUEL A. McPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

Daniel W. Manning, '76.

Lewis Stiles, '76.

John Courtney.

Frank Brady, '73, '74, resig'ed March 27.

Jared P. Maxfield, '73, '74, elected May 8.

WARD 2.

Charles E. Hallowell, '76.

Francis D. Munn, '68, '69.

Charles H. Robbins.

Oliver M. Harding.

WARD 3.

William H. Grady, '76.

Patrick Lynch.

Simon Kelly.

George E. Davis.

WARD 4.

Gardner W. King, '76.

James W. Bennett, '76.

Irving K. Goodale.

Orlando Blodgett.

WARD 5.

John F. Kimball, ‡'76.

Charles H. Hanson '76.

Peter S. Coburn.

Robert Goulding.

WARD 6.

Edwin Sanborn, '76.

John J. Pickman, '76.

Charles H. Walker, '76.

Augustus E. Spaulding, dec. January 10

George S. Cushing, elected February 6.

DAVID CHASE, Clerk.

1878.**MAYOR:****JOHN A. G. RICHARDSON.****ALDERMEN:**

Stephen B. Puffer, *'77.
 Robert Park, *'77.
 Horace R. Barker, *'77.
 George F. Scribner, '57.

George E. Scripture.
 Joseph S. Pollard, '64, '65, [*'77.
 Jeremiah Crowley, '70, '71, *'73, *'74,
 Nathaniel C. Sanborn, '71, '72, '73, *'74.

SAMUEL A. McPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

John Courtney, '77.
 John J. Mealey.
 Joseph M. Ambrose.
 Charles H. Harvey, '74, '75.

WARD 2.

Oramel A. Brigham.
 Edward M. Tucke.
 William W. Clark.
 Albert W. Monty.

WARD 3.

Simon Kelly, '77.
 Edward Cawley.
 Henry P. Morris.
 Samuel D. Butterworth.

WARD 4.

Irving K. Goodale, '77.
 Orlando Blodgett, '77.
 Robert G. Bartlett.
 Stephen H. Jones, '76.

WARD 5.

Robert Goulding, '77.
 Peter S. Coburn, '77.
 John F. Kimhall, †'76, †'77, President.
 Enos O. Kingsley, '56.

WARD 6.

George S. Cushing, '77.
 Eli W. Hoyt.
 Luke B. Taylor.
 Miles F. Brennan, to January 22.
 Thomas Nesmith, from January 22.

DAVID CHASE, Clerk.**1879.****MAYOR:****JOHN A. G. RICHARDSON, †'78.****ALDERMEN:**

Horace R. Barker, *'77, *'78.
 Charles A. R. Dimon.
 Joseph S. Pollard, '64, '65, *'78.
 Charles S. Lilley.

George E. Scripture, *'78.
 George F. Scribner, '57, *'78.
 Charles F. Howe.
 Robert Goulding, '77, '78.

SAMUEL A. McPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

Joseph M. Ambrose, '78.
 John O'Donnell.
 James Kelly.
 Richard J. Noonan.

WARD 2.

Albert W. Monty, '78.
 Charles H. Richardson.
 William K. Chase, resigned November 25.
 Edwin A. Robinson.
 Edward M. Tucke, '78, elected Dec. 9.

WARD 3.

Edward Cawley, '78.
 Henry P. Morris, '78.
 William T. Benson.
 Patrick A. Rogers.

WARD 4.

Robert G. Bartlett, '78.
 Fred Woodies.
 Charles F. Varnum.
 Charles E. Farrington.

WARD 5.

Albert W. Burnham.
 Ambrose L. Ready.
 Joseph M. Wilson.
 Edward B. Peirce, President.

WARD 6.

Eli W. Hoyt, '78.
 Luke B. Taylor, '78.
 Major A. Shaw.
 Miles F. Brennan, '78.

DAVID CHASE, Clerk.

1880.**MAYOR:****FREDERIC T. GREENHALGE, '68, '69.****ALDERMEN:**

James D. Hartwell, '70, '75.
 Atwill F. Wright, '63, '64.
 Charles H. Richardson.
 Edwin Lamson, '68, '69.

Isaac F. Scripture, *'62, *'63.
 Robert Wood.
 Charles H. Coburn.
 James C. Abbott.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

James Kelly, '79.
 Richard J. Noonan, '79.
 Thomas J. Flynn.
 Lawrence Cummings.

WARD 2.

Edwin A. Robinson, '79.
 Wilbur L. Bates.
 Samuel W. Foster.
 Earl A. Thissell, '72, '73, '75, President.

WARD 3.

Peter H. Donohoe.
 William T. Benson, '79.
 Patrick A. Rogers, '79.
 Frank Wood.

WARD 4.

Fred Woodies, '79.
 Charles F. Varnum, '79.
 Charles E. Farrington, '79.
 Charles D. Starbird, '76.

WARD 5.

Joseph M. Wilson, '79.
 Ambrose L. Ready, '79.
 Samuel Hosmer.
 Edward B. Peirce, ‡ '79.

WARD 6.

Benjamin F. Freeman.
 J. Tyler Stevens.
 Charles C. Hutchinson.
 Henry C. Cooper.

DAVID CHASE, Clerk.**1881.****MAYOR:****FREDERIC T. GREENHALGE, '68, '69, † '80.****ALDERMEN:**

Charles H. Richardson, *'80.
 Isaac F. Scripture, *'62, *'63, *'80.
 Robert Wood, *'80.
 Ambrose L. Ready, '79, '80.

Levi Sprague, '59, '64.
 Julius A. Stiles.
 Samuel D. Butterworth, '78.
 Thomas R. Garity, '75.

SAMUEL A. MCPHETRES, City Clerk.**COMMON COUNCIL:****WARD 1.**

Thomas J. Flynn, '80.
 Lawrence Cummings, '80.
 Robert J. Thomas.
 Jeremiah J. Hayes.

WARD 2.

Zachariah D. Hall.
 James M. Howe, '57, '59.
 Hubert M. Potter.
 Moses Gibson.

WARD 3.

Frank Wood, '80.
 Peter H. Donohoe, '80.
 John E. Maguire.
 D. Moody Prescott.

WARD 4.

Julius C. Johnson.
 Stephen C. Davis.
 Edward Garner.
 William N. Osgood.

WARD 5.

Atkinson C. Varnum.
 Samuel Hosmer, '80.
 Samuel P. Marin, '74.
 Albert W. Burnham, '79.

WARD 6.

Charles C. Hutchinson, '80.
 Albert G. Thompson.
 Thomas Nesmith, '78.
 Lawrence J. Smith.

DAVID CHASE, Clerk.

1882.**MAYOR:****GEORGE RUNELS, '62, *'64.****ALDERMEN:**

Thomas R. Garity, '75, *'81, Chairman.	D. Moody Prescott, '81.
* Charles W. Sleeper.	George S. Cushing, '77, '78.
George B. Smith.	John F. Phillips.
William A. Wright, '63, '66.	† John Welch.
David Whitaker.	

† **SAMUEL A. MCPHETRES**, City Clerk. § **DAVID W. O'BRIEN**, City Clerk.

* Resigned, May 23; special election to fill vacancy, June 20.

† Elected June 20, to fill vacancy. ‡ Died Sept. 23, 1882 § Elected Oct. 4, 1882.

COMMON COUNCIL:**WARD 1.**

Robert J. Thomas, '81.
Jeremiah J. Hayes, '81.
Dennis J. Crowley.
John A. Walsh.

WARD 2.

Zachariah D. Hall, '81.
James M. Howe, '57, '59, '81.
Moses Gibson, '81.
James F. Puffer, Jr.

WARD 3.

Frank Wood, '80, '81.
John E. Maguire, '81.
John J. Mead.
James Grady.

WARD 4.

Julius C. Johnson, '81.
Stephen C. Davis, '81.
Edward Garner.
William N. Osgood, '81, President.

WARD 5.

Atkinson C. Varnum, '81.
Albert W. Burnham, '79, '81.
Artemas B. Woodworth.
Horace B. Barnes.

WARD 6.

Albert G. Thompson, '81.
Lawrence J. Smith, '81.
Thaddeus S. Cobb.
Miles J. Fletcher.

DAVID CHASE, Clerk.**1883.****MAYOR:****JOHN J. DONOVAN.****ALDERMEN:**

John F. Phillips, *'82, Chairman.	D. Moody Prescott, '81, *'82.
George B. Smith, *'82.	George W. Fifield.
Robert J. Thomas, '81, '82.	John Welch, *'82.
David Whitaker, *'82.	Miles J. Fletcher, '82.

DAVID W. O'BRIEN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Dennis J. Crowley, '82.
John J. Hogan.
James H. Cahill.
Daniel Murphy.

WARD 2.

Samuel Lawrence, '50.
Joseph S. Brown, '72, '73, *'74, *'75.
Albert W. Monty, '78, '79.
John F. Thissell.

WARD 3.

James Grady, '82.
John J. Mead, '82.
Patrick J. Smith.
Frank J. Donohue.

WARD 4.

James G. Elliott.
Solomon K. Dexter.
Alonzo L. Russell, '72.
Geo. A. Bennett.

WARD 5.

Edward B. Pierce, ‡ '79, '80.
Artemas B. Woodworth, '82.
John P. Mahoney.
George L. Ashworth.

WARD 6.

Lawrence J. Smith, '81, '82.
Thaddeus S. Cobb, '82.
J. Frank Page.
Michael F. Clark.

DAVID CHASE, Clerk.

1884.**MAYOR:****JOHN J. DONOVAN, † '83.****ALDERMEN:**

Robert J. Thomas, '81, '82, *'83, Chair'n.	Jeremiah Crowley, '70, '71, *'73, *'74, *'77, *'78.
Miles J. Fletcher, '82, *'83.	Peter H. Donohoe, '80, '81.
George W. Fifield, '83.	Freeman B. Shedd.
Thaddens S. Cobb, '82, '83.	
Edward B. Quinn.	

DAVID W. O'BRIEN, City Clerk.**COMMON COUNCIL:****WARD 1.**

John J. Hogan, '83, President.
 James H. Cahill, '83.
 Daniel Murphy, '83.
 James H. Morrison.

WARD 2.

Joseph S. Brown, '72, '73, *'74, *'75, '83.
 Albert W. Monty, '78, '79, '83.
 Earl A. Thissell, '72, '73, '75, † '80.
 John R. Pike.

WARD 3.

Patrick J. Smith, '83.
 Peter J. Brady.
 Thomas J. Sparks.
 John Nolan.

WARD 4.

James G. Elliott, '83.
 Solomon K. Dexter, '83.
 Alonzo L. Russell, '72, '83.
 George A. Bennett, '83.

WARD 5.

Edward B. Peirce, † '79, '80, † '83.
 George L. Ashworth,
 Joseph M. Wilson, '79, '80.
 James S. Hanson.

WARD 6.

J. Frank Page, '83.
 Michael F. Clark, '83.
 Alfred M. Chadwick.
 Marcellus H. Fletcher.

DAVID CHASE, Clerk.**1885.****MAYOR:****EDWARD J. NOYES.****ALDERMEN:**

John F. Phillips, *'82, *'83, Chairman.	James D. Hartwell, '70, '75, *'80.
John F. Howe, '57, '58, *'59.	George F. Penniman.
William D. Brown.	Oliver E. Cushing.
George E. Stanley, *'76, *'77.	James Francis.

SAMUEL M. CHASE, City Clerk.**COMMON COUNCIL:****WARD 1.**

Patrick H. Plunkett.
 James H. Morrison, '84.
 Thomas J. Enright.
 Henry F. Keyes.

WARD 2.

George W. Brothers.
 Walter M. Sawyer.
 James R. Fulton.
 Francis D. Munn, Jr.

WARD 3.

Peter J. Brady, '84.
 Patrick J. Smith, '83, '84.
 John Nolan, '84.
 Thomas J. Sparks, '84.

WARD 4.

Arnold S. Welch.
 George A. Roper.
 William A. Lang.
 Frank W. Howe.

WARD 5.

Wilson W. Carey.
 James S. Hanson, '84.
 Henry L. Newhall.
 Elwyn W. Lovejoy.

WARD 6.

Alfred M. Chadwick, '84, President.
 George R. Richardson.
 Luke B. Taylor, '78, '79.
 William H. White.

DAVID CHASE, Clerk.

*

1886.**MAYOR:****JAMES C. ABBOTT.****ALDERMEN:**

Jeremiah Crowley, '70, '71, *'73, *'74,	Daniel Wright.
*'77, *'78, *'84, Chairman.	Samuel D. Butterworth, *'78, *'81.
John F. Phillips, *'82, *'83, *'85.	George F. Penniman, *'85.
Stephen B. Puffer, *'77, *'78.	James Francis, *'85.
George E. Stanley, *'76, *'77, *'85.	

SAMUEL M. CHASE, City Clerk.**COMMON COUNCIL:****WARD 1.**

Peter B. Sherlock.
 Patrick H. Plunkett, '85.
 Thomas J. Enright, '85.
 Timothy H. Brennan.

WARD 2.

Walter M. Sawyer, '85, President.
 Charles H. Richardson, '79.
 James R. Fulton, '85.
 Francis D. Munn, Jr., '85.

WARD 3.

Daniel Cleary.
 Patrick J. Mahan.
 Edward D. McVey.
 Thomas J. Sparks, '84, '85.

WARD 4.

Arnold S. Welch, '85.
 George A. Roper, '85.
 Frank W. Howe, '85.
 William A. Lang, '85.

WARD 5.

Henry L. Newhall, '85.
 Elwyn W. Lovejoy, '85.
 Wilson W. Carey, '85.
 Roswell M. Boutwell, '85.

WARD 6.

Lawrence J. Smith, '81, '82, '83.
 John E. Drury.
 Charles H. Hobson.
 Marcellus H. Fletcher, '84.

DAVID CHASE, Clerk.**1887.****MAYOR:****JAMES C. ABBOTT, † '86.****ALDERMEN:**

Stephen B. Puffer, *'77, *'78, *'86, Chairman.	Peter H. Donohoe, '80, 81, *'84.
Nathan D. Pratt.	Miles J. Fletcher, '82, *'83, *'84.
Francis C. Plunkett.	Frederick Frye, '62, '63, *'68.
August Fels.	Marcellus H. Fletcher, '84, '86.

DAVID W. O'BRIEN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Michael J. Garvey.
 Dennis A. Sullivan.
 Daniel Murphy, '83, '84.
 Dennis J. Leary.

WARD 2.

Walter M. Sawyer, † '86.
 Charles H. Richardson, '79, '86.
 George C. Evans.
 Horace P. Beals.

WARD 3.

George B. McKenna.
 John Nolan, '84, '85.
 Daniel Cleary, '86.
 Patrick J. Smith, '83, '84, '85.

WARD 4.

Millard F. Wright.
 Edmund B. Conant.
 Jesse H. Shepard.
 Richard Dobbins.

WARD 5.

Roswell M. Boutwell, '86.
 George W. Brothers, '85.
 Clarence G. Coburn.
 James H. Carmichael, President.

WARD 6.

Richard B. Allen.
 John E. Drury, '86.
 Patrick Conlon.
 Edward Gallagher.

WILLIAM J. COUGHLIN, Clerk.

1888.**MAYOR:****CHARLES D. PALMER.****ALDERMEN:**

George A. Scribner.
George E. Putnam.
Charles Runels, '76.
Charles E. Carter.
Edward D. Holden.

Arthur Staples.
Roswell M. Boutwell, '86, '87.
Alfred M. Chadwick, '84, † '85, Chairm'n.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Dennis A. Sullivan, '87.
Dennis J. Leary, '87.
Daniel Murphy, '83, '84, '87.
Michael J. Garvey, '87.

WARD 2.

Frank J. Sherwood.
Horace P. Beals, '87.
Harry E. Shaw.
Pierre A. Brousseau.

WARD 3.

John F. Rogers.
Owen M. Donohoe.
Thomas J. Sparks, '84, '85, '86.
*John F. Roane.
† Patrick H. Brosnahan.
*Resigned Aug. 9. Special Election to fill vacancy Sept. 18.
† Elected Sept. 18 to fill vacancy.

DAVID CHASE, Clerk**WARD 4.**

*Millard F. Wright, '87.
Edmund B. Conant, '87, President.
Jesse H. Shepard, '87.
Richard Dobbins, '87.
† Alonzo G. Walsh.
*Resigned April 24. Special Election to fill vacancy June 5.
† Elected June 5 to fill vacancy.

WARD 5.

Charles C. Hartwell.
Clarence G. Coburn, '87.
George W. Brothers, '85.
Joseph S. Lapierre.

WARD 6.

William E. Westall.
Frank Brown.
Richard B. Allen, '87.
Abbott Lawrence.

1889.**MAYOR:****CHARLES D. PALMER, † '83.****ALDERMEN:**

George A. Scribner, *'88.
Walter M. Sawyer, '85, † '86, '87.
George E. Putnam, *'88.
Edward D. Holden.

Roswell M. Boutwell, '86, '87, *'88, Ch'n.
John H. Fuller.
William F. Senter.
John E. Drury, '86, '87.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Patrick J. Savage.
Joseph H. Callahan.
Daniel H. Courtney.
William J. Johnson.

WARD 2.

*Samuel C. George.
Pierre A. Brousseau, '88.
Arthur H. Clier.
Frank J. Sherwood, '88.
† James Stuart Murphy.
*Res'd June 9. † Ele. July 2, to fill vacancy.

WARD 3.

Owen M. Donohoe, '88.
Stephen Garrity.
Patrick H. Brosnahan, '88.
Thomas J. Sparks, '84, '85, '86, '88.

WARD 4.

B. Frank Hale.
Edwards Cheney.
Alonzo G. Walsh, '88.
Frank Gray.

WARD 5.

Orford R. Blood, '75, '76.
Charles C. Hartwell, '88.
Henry W. Ladd.
Henry J. Draper.

WARD 6.

William E. Westall, '88, President.
Abbott Lawrence, '88.
Albert Crowell.
Frank Brown, '88.

DAVID CHASE, Clerk.

1890.**MAYOR:****CHARLES D. PALMER,** '88, † '89.**ALDERMEN:**

Albert D. Carter.
 Watson A. Dickinson.
 John E. Drury, '86, '87, *'89.
 Edmund D. Fletcher.

John H. Fuller, *'89, Chairman.
 Walter M. Sawyer, '85, † '86, '87, *'89.
 Samuel E. Snow.
 Joseph M. Wilson, '79, '80, '84.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Joseph H. Callahan, '89.
 Daniel H. Courtney, '89.
 William J. Johnson, '89.
 Patrick J. Savage, '89.

WARD 2.

Newell Abare.
 Arthur H. Clier, '89.
 Walter C. Coburn.
 James Stuart Murphy, '89.

WARD 3.

Patrick H. Brosnahan, '88, '89.
 Robert C. Gallagher.
 Charles L. Marren.
 Thomas J. Sparks, '84, '85, '86, '88, '89.

WARD 4.

Edwards Cheney, '89.
 Frank Gray, '89.
 B. Frank Hale, '89.
 Alonzo G. Walsh, '88, '89, President.

WARD 5.

Orford R. Blood, '75, '76, '89.
 Herbert M. Jacobs.
 Henry W. Ladd, '89.
 Louis P. Turcotte.

WARD 6.

Albert Crowell, '89.
 Daniel D. Driscoll.
 James Gookin.
 Edward F. Spalding.

DAVID CHASE Clerk.**1891.****MAYOR:****GEORGE W. FIFIELD,** *'83, *'84.**ALDERMEN:**

Richard B. Allen, '86, '87.
 James W. Cossidy.
 Jeremiah Crowley, '70, '71, *'73, *'74, *'77,
 *'78, *'84, *'86, Chairman.
 Watson A. Dickinson, *'90.

Thomas J. Enright, '85, '86.
 George H. Frye.
 Stephen B. Puffer, *'77, *'78, *'86, *'87.
 George F. Tilton.

MICHAEL J. DOWD, City Clerk.**COMMON COUNCIL:****WARD 1.**

Patrick H. Barry.
 James F. Doherty.
 John J. Sullivan.
 Peter F. Garrity.

WARD 2.

Newell Abare, '90.
 Adolphe Benard.
 Walter C. Coburn, '90.
 George H. Marston.

WARD 3.

Patrick J. Baxter.
 John J. Gilbride.
 Charles H. Marren, '90.
 Thomas J. Sparks, '84, '85, '86, '88, '89,
 '90, President.

WARD 4.

Edwin L. Giles.
 Fred Horne.
 Wallace G. Parkin.
 Eugene C. Wallace.

WARD 5.

Herbet M. Jacobs, '90.
 George D. Kimball.
 John A. Speirs.
 Louis P. Turcotte, '90.

WARD 6.

James A. Cawley.
 James J. Dolan.
 Daniel D. Driscoll, '90.
 James Gookin, '90.

DAVID CHASE, Clerk.

1892.**MAYOR:****GEORGE W. FIFIELD, '83, '84, † '91.****ALDERMEN:**

Samuel D. Butterworth, '78, '81, '86. Stephen J. Johnson.
 James W. Cassidy, '91. Freeman W. Puffer.
 William J. Coughlin. Frank E. Stowell.
 Albert A. Haggett, '68, '69, † '70, '71, Charles F. Varnum, '79, '80.
 *'76, Chairman.

MICHAEL J. DOWD, City Clerk.**COMMON COUNCIL****WARD 1.**

John Brunette.
 James O'Neill,
 Joseph O'Rourke.
 John J. Sullivan, '91.

WARD 2.

Adolphe Benard, '91.
 George H. Marston, '91.
 Frank Scott.
 Hugh A. Thompson.

WARD 3.

Patrick J. Baxter, '91.
 John J. Gilbride, '91.
 Thomas J. Sparks, '84, '85, '86, '88, '89,
 '90, † '91, President.
 William H. Stafford.

WARD 4.

Edwin L. Giles, '91.
 Fred Horne, '91.
 Wallace G. Parkin, '91.
 Moses Wyman.

WARD 5.

Constant Henotte.
 Patrick H. Kehoe.
 Joseph A. McDonald.
 Charles W. Swan.

WARD 6.

William T. Benson, '79, '80.
 James J. Dolan, '91.
 Thomas F. Hoban.
 Michael F. McCarthy.

DAVID CHASE, Clerk.**1893.****MAYOR:****JOHN J. PICKMAN, '76, '77.****ALDERMEN:**

George R. Choate. Freeman W. Puffer, '92.
 George C. Evans, '87. Stephen B. Puffer, '77, '78, '86, '87,
 Stephen J. Johnson, '92. *'91.
 Elwyn W. Lovejoy, '85, '86. William E. Westall, '88, † '89, Chairman.
 Joseph A. McDonald, '92.

MICHAEL J. DOWD, City Clerk.**COMMON COUNCIL:****WARD 1.**

John Brunette, '92.
 Patrick J. O'Brien.
 James O'Neil, '92.
 Fred H. Rourke.

WARD 2.

Charles H. Boisvert.
 Frank Scott, '92.
 Hugh A. Thompson, '92.
 George H. Tryder.

WARD 3.

Frank Dunlap.
 John J. Grady.
 John Joseph O'Connor.
 William H. Stafford, '92.

WARD 4.

George E. Barclay.
 William J. Hills.
 Charles T. Killpartrick.
 Moses Wyman, '92.

WARD 5.

Cyrille Constantineau.
 Patrick J. Custy.
 Charles H. Noble.
 James O'Sullivan.

WARD 6.

William T. Benson, '79, '80, '92, Pres.
 James J. Dolan, '91, '92.
 Thomas F. Hoban, '92.
 Anthony Robinson.

FRANK J. SIMONDS, Clerk.

1894.**MAYOR:****JOHN J. PICKMAN, '76, '77, † '93.****ALDERMEN:**

Charles N. Bagley.
 Watson A. Dickinson, *'90, *'91.
 Frank Dunlap, '93.
 Coolidge R. Johnson.
 Stephen J. Johnson, *'92, *'93.

Elwyn W. Lovejoy, '85, '86, *'93, Chair-
 man.
 George E. Stanley, *'76, *'77, *'85, *'86.
 William E. Westall, '88, † '89, *'93.

MICHAEL J. DOWD, City Clerk.**COMMON COUNCIL:****WARD 1.**

Matthew M. Mansfield.
 Patrick J. O'Brien, '93.
 Fred H. Rourke, '93.
 John J. Ryan.

WARD 2.

J. Henry Collins.
 John G. Gordon.
 Fred W. Sanborn.
 George H. Tryder, '93.

WARD 3.

Joseph H. Gormley.
 John J. O'Connell.
 John Joseph O'Connor, '93.
 Thomas J. Sparks, '84, '85, '86, '88, '89,
 '90, † '91, † '92, President.

WARD 4.

George E. Barclay, '93.
 William L. Hills, '93.
 Charles T. Killpartrick, '93.
 Luther F. Kittredge.

WARD 5.

Patrick J. Custy, '93.
 Frederick E. Labarge.
 Charles H. Noble, '93.
 John Oliver.

WARD 6.

William T. Benson, '79, '80, '92, † '93,
 Died May 21, 1894.
 William F. Curtin.
 Charles Riley.
 Anthony Robinson, '93.
 Thomas O'Day, Elected July 17, '94.

FRANK J. SIMONDS, Clerk.**1895.****MAYOR:****WILLIAM F. COURTNEY.****ALDERMEN:**

Frank B. Dow.
 Frederic J. Flemings.
 William L. Hills, '93, '94.
 Charles E. Howe.

George H. Tryder, '93, '94.
 Daniel H. Varnum, Chairman.
 John C. Wilson.
 Moses Wyman, '92, '93.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Patrick H. Barry, '91.
 Thomas F. Garvey.
 Hugh Maguire, Jr.,
 Matthew M. Mansfield.

WARD 2.

Edwin S. Eastman.
 William Hounsell.
 Willis E. Morse.
 Fred W. Sanborn, '94.

WARD 3.

Patrick F. Delehanty.
 Joseph H. Gormley, '94.
 James F. Miskella.
 Timothy J. Reynolds.

WARD 4.

David Dickson.
 Edward T. Goward.
 Jonathan G. Hunton.
 Herbert E. Webster.

WARD 5.

Eugene E. Dennison.
 George W. Hartwell.
 John Oliver.
 Francis P. Rivet.

WARD 6.

William F. Curtin, '94, President.
 Thomas O'Day, '94.
 Charles Riley, '94.
 John E. Sullivan.

FRANK J. SIMONDS, Clerk.

1896.**MAYOR:****WILLIAM F. COURTNEY, † '95.****ALDERMEN:**

Jeremiah Crowley, '70, '71, *'73, *'74, John H. McAlvin.
 *'77, *'78, *'84, *'86, Chairman. James A. Pevey.
 Frank B. Dow, *'95. George H. Tryder, '93, '94, *'95.
 Frederic J. Flemings, *'95. Edward M. Tucke.
 Charles E. Howe, *'95. John C. Wilson, *'95.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

William Hounsell, '95, ward 2.
 Jonathan G. Hunton, '95, ward 4.
 Homer B. Nay.

WARD 2.

William J. Dunn.
 Hugh Maguire, Jr., '95, ward 1.
 Dennis J. Pendergast.

WARD 3.

David Dickson, '95, ward 4.
 Frank H. Hallett.
 Herbert M. Jacobs, '90, '91, ward 5.

WARD 4.

James F. Miskella, '95, ward 3.
 Stephen O'Hare.
 Timothy J. Reynolds, '95, ward 3.

WARD 5.

John P. O'Hare.
 John E. Sullivan, '95, ward 6.
 Charles E. Thornton.

WARD 6.

William E. Badger.
 Sidney Drewett.
 Edwin S. Eastman.

WARD 7.

George W. Hartwell, '95, ward 5.
 Francis P. Rivet, '95, ward 5.
 Lorenzo E. Smith.

WARD 8.

Fred A. George.
 William H. Penn.
 Herbert E. Webster, '95, ward 4, Pres't.

WARD 9.

Charles A. Eveleth. Henry K. White.
 Carl G. A. F. W. E. Pihl.

FRANK N. OWEN, Clerk.**1897.****MAYOR:****WILLIAM F. COURTNEY, † '95, † '96.****ALDERMEN:**

Charles H. Cosgrove. Charles E. Howe, *'95, *'96, Chairman.
 Lucius A. Derby. Abbot Lawrence, '88, '89.
 Edwin S. Eastman, '95, '96. Edward B. Pierce, †'79, '80, †'83, '84.
 Edward T. Goward, '95. Fred A. Tuttle.
 George L. Hooper.

GIRARD P. DADMAN, City Clerk.**COMMON COUNCIL:****WARD 1.**

Anadore B. Bosca.
 Clarence W. Dana.
 Samuel Scott.

WARD 2.

William J. Dunn, '96.
 James Kennedy.
 Dennis J. Pendergast, '96.

WARD 3.

William H. Brown.
 James Smith.
 Oliver D. Wilder.

WARD 4.

Francis M. Fagan.
 James F. Miskella, '95, '96.
 Stephen O'Hare, '96.

WARD 5.

George Farley.
 Michael E. Sullivan.
 Charles E. Thornton, '96.

WARD 6.

John H. Beaulieu.
 Walter F. Leighton.
 George H. Taylor.

WARD 7.

Clovis Belanger.
 Lorenzo E. Smith, '96.
 Lincoln R. Welch.

WARD 8.

Arthur W. Lang.
 Charles F. Libby.
 William H. Penn, '96, President.

WARD 9.

Butler Ames. Louis B. Sykes.
 Henry K. White, '96.

FRANK N. OWEN, Clerk.

1898.**MAYOR:**

JAMES W. BENNETT, '76, '77.

ALDERMEN:

Charles H. Cosgrove, *97.

Lucius A. Derby, *97.

Charles A. R. Dimon, *79, Chairman.

Edward T. Goward, '95, *97.

Guy Holbrook.

Oliver A. Libby.

Edward B. Peirce, †'79, '80, †'83, '84, *97.

Francis P. Rivet, '95, '96.

Fred A. Tuttle, *97.

GIRARD P. DADMAN, City Clerk.

COMMON COUNCIL:**WARD 1.**

Anadore B. Bosca, '97.

Clarence W. Dana, '97.

Charles D. Paige.

WARD 2.

Thomas F. Garvey, '95.

James Kennedy, '97.

Frank McMahon.

WARD 3.

James Smith, '97.

Burton H. Wiggin,

Oliver D. Wilder, '97.

WARD 4.

Francis M. Fagan, '97.

Michael J. Markham.

John J. Roark.

WARD 5.

George A. Farley, '97.

William J. McCluskey.

Michael Sullivan, '97.

WARD 6.

John H. Beaulieu, '97.

Walter F. Leighton, '97.

George H. Taylor, '97, President.

WARD 7.

Alfred J. Howe.

Charles H. Merrill.

Eben B. Stafford.

WARD 8.

Arthur W. Lang, '97.

Charles F. Libby, '97.

Anthony D. Mitten.

WARD 9.

Walter E. Murkland,

William D. Whittet.

Louis B. Sykes, '97.

FRANK M. DOWLING, Clerk.

SEVENTY-THIRD
ANNUAL REPORT
OF THE
SCHOOL COMMITTEE
OF THE
CITY OF LOWELL, MASS.
AND THE
THIRTY-FIFTH ANNUAL REPORT
OF THE
Superintendent of Public Schools.
1898.



LOWELL, MASS. ,
UNION PRINT, 67 MIDDLE ST.,
1899.

CITY OF LOWELL.

OFFICE OF THE SCHOOL COMMITTEE,

LOWELL, MASS., Jan. 2, 1899.

At a meeting of the School Committee, Jan. 2, 1899, the report of the Committee on Reports for 1898 was presented by the chairman, Mr. Stearns, accepted, and ordered to be printed together with other reports of committees and the report of the Superintendent of Schools for the year 1898.

In accordance with this vote the reports are herewith presented.

A. K. WHITCOMB, Secretary.

ORGANIZATION

OF THE

SCHOOL COMMITTEE, 1898.

ANDREW G. SWAPP, President.

ARTHUR K. WHITCOMB, Secretary

Ward 1.—	AZRO H. SCHOOLCRAFT, 46 Bowditch St.	Term expires	1899
“ 2.—	THOMAS J. MURPHY, 91 Dummer Street,	“ “	1899
“ 3.—	GEORGE F. THOMAS, 417 Middlesex St.,	“ “	1898
“ 4.—	JAMES E. DONNELLY, 36 Floyd Street,	“ “	1899
“ 5.—	HUGH F. FARLEY, 202 Concord Street,	“ “	1898
“ 6.—	FRANK K. STEARNS, 256 Lawrence St.,	“ “	1898
“ 7.—	ANDREW G. SWAPP, 307 Pawtucket Street,	“ “	1899
“ 8.—	WILLARD EVERETT, 12 Belmont Street,	“ “	1898
“ 9.—	ALBERT G. THOMPSON, 195 East Merri- mack Street,	“ “	1899

STANDING COMMITTEES.

ON TEACHERS.—Messrs. Swapp, Everett, Farley.

ON BOOKS AND SUPPLIES.—Messrs. Thomas, Schoolcraft, Stearns, Farley, Murphy.

ON EVENING SCHOOLS.—Messrs. Everett, Swapp, Schoolcraft, Stearns, Murphy.

ON HIGH SCHOOL.—Messrs. Thompson, Everett, Swapp, Farley, Donnelly.

ON PENMANSHIP AND DRAWING.—Messrs. Thomas, Schoolcraft, Donnelly.

ON MUSIC.—Messrs. Schoolcraft, Thompson, Donnelly.

ON REPORTS AND PRINTING.—Messrs. Stearns, Thomas, Farley.

ON ACCOUNTS.—Messrs. Donnelly, Thompson, Stearns.

ON SCHOOL HOUSES AND HYGIENE.—Messrs. Thomas, Swapp, Murphy.

ON RULES.—Messrs. Murphy, Thompson, Everett.

ASSIGNMENT OF SCHOOLS.

MR. SCHOOLCRAFT.—Edson, Eliot, Kirk Street, Chapel Street.

MR. MURPHY.—Green, Worthen Street, Cheever Street, Morrill, Worthen Street Kindergarten.

MR. THOMAS.—Lincoln, Howard Street, Grand Street, Lincoln Kindergarten.

MR. DONNELLY.—High, Butler, London Street, Weed Street, Agawam Street, Carter Street, Lyon Street, Agawam Street and Chapel Street Kindergartens.

MR. FARLEY.—High, Charles Street, Central Street, Ames Street, Fayette Street.

MR. STEARNS.—Varnum, West Sixth Street, Tenth Street, Lakeview Avenue, Billings Street, Bridge Street Kindergarten.

MR. SWAPP.—High, Bartlett, Pawtucket, Training, School Street, Cross Street, Cabot Street, Mammoth Road, Lexington Avenue, Pawtucketville, Training and Bartlett Kindergartens.

MR. EVERETT.—High, Highland, Franklin, Dover Street, Powell Street, Plain Street, Pine Street, Middlesex Village, Franklin and Dover Street Kindergartens.

MR THOMPSON —High, Moody, Pond Street, High Street, Sycamore Street, Moody Kindergarten.

ASSIGNMENT OF EVENING SCHOOLS.

MR. EVERETT.—High, Mann, Howard Street.

MR. SWAPP.—Bartlett, Green, Pawtucket.

MR. STEARNS.—Varnum, Aiken Avenue.

MR. SCHOOLCRAFT.—Edson, Colburn, High Street.

MR. MURPHY.—Butler, Franklin.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.
Office in City Hall.

OFFICE HOURS.—One hour after the forenoon session of schools, and from 2 to 3 o'clock on Saturday afternoon.

Telephone 566-4.

JOHN F. WILLIAMS, School Supply Room.
Telephone 549-5.

TRUANT COMMISSIONERS.

JOHN F. WILLIAMS. JAMES KELLY. WILLIAM F. THORNTON.
Office in City Hall, Third Floor.

OFFICE HOURS.—Saturday, 2 to 3 o'clock P. M. Other days 4 to 5 o'clock P. M., except during July and August, when the office will be open from 9 to 10 o'clock A. M.

REGULAR MEETINGS OF THE SCHOOL COMMITTEE.

January 31.	February 28.	March 28.	April 25.
May 30.	June 27.	July 25.	August 29.
September 26.	October 31.	November 28.	December 26.

ORGANIZATION

OF THE

SCHOOL COMMITTEE, 1899.

ANDREW G. SWAPP, President.

ARTHUR K. WHITCOMB, Secretary.

Ward 1.—	AZRO H. SCHOOLCRAFT, 123 Prince St.	Term expires	1899
“ 2.—	THOMAS J. MURPHY, 91 Dammer Street,	“ “	1899
“ 3.—	CHARLES L. SWEETSIR, 276 Westford St.,	“ “	1900
“ 4.—	JAMES E. DONNELLY, 36 Floyd Street,	“ “	1899
“ 5.—	DENNIS J. MURPHY, 33 Tyler Street,	“ “	1900
“ 6.—	FRANK K. STEARNS, 256 Lawrence Street,	“ “	1900
“ 7.—	ANDREW G. SWAPP, 307 Pawtucket Street,	“ “	1899
“ 8.—	WILLARD EVERETT, 12 Belmont Street,	“ “	1900
“ 9.—	ALBERT G. THOMPSON, Lowell Post Office,	“ “	1899

STANDING COMMITTEES.

ON TEACHERS.—Messrs. Swapp, Everett, Donnelly.

ON BOOKS AND SUPPLIES.—Messrs. Stearns, Schoolcraft, Sweetsir, T. J. Murphy, D. J. Murphy.

ON EVENING SCHOOLS.—Messrs. Everett, Swapp, Schoolcraft, Stearns, T. J. Murphy.

ON HIGH SCHOOL.—Messrs. Thompson, Everett, Swapp, Donnelly, D. J. Murphy.

ON PENMANSHIP AND DRAWING.—Messrs. Schoolcraft, Sweetsir, T. J. Murphy.

ON MUSIC.—Messrs. Stearns, Thompson, Donnelly.

ON REPORTS AND PRINTING.—Messrs. Thompson, Schoolcraft, D. J. Murphy.

ON ACCOUNTS.—Messrs. Donnelly, Stearns, Sweetsir.

ON SCHOOL-HOUSES AND HYGIENE.—Messrs. Sweetsir, Swapp, D. J. Murphy.

ON RULES.—Messrs. T. J. Murphy, Thompson, Everett.

ASSIGNMENT OF SCHOOLS.

MR. SCHOOLCRAFT.—Edson, Eliot, Kirk Street, Cottage Street.

MR. T. J. MURPHY.—Green, Worthen Street, Cheever Street, Morrill, Worthen Street Kindergarten.

MR. SWEETSIR.—Lincoln, Howard Street, Grand Street, Plain Street, Lincoln Kindergarten.

MR. DONNELLY.—High, Butler, London Street, Weed Street, Agawam Street, Carter Street, Lyon Street, Agawam Street and Chapel Street Kindergartens.

MR. D. J. MURPHY.—High, Charles Street, Central Street, Ames Street, Fayette Street.

MR. STEARNS.—Varnum, West Sixth Street, Tenth Street, Lakeview Avenue, Billings Street, Varnum Kindergarten.

MR. SWAPP.—High, Bartlett, Pawtucket, Training, Cross Street, Cabot Street, New Moody Street, Lexington Avenue, Pawtucketville, Training and Bartlett Kindergartens.

MR. EVERETT.—High, Highland, Franklin, Dover Street, Powell Street, Pine Street, Middlesex Village, Franklin, Dover and Pine Street Kindergartens.

MR. THOMPSON.—High, Moody, Pond Street, High Street, Sycamore Street, Moody Kindergarten.

ASSIGNMENT OF EVENING SCHOOLS.

MR. EVERETT.—High, Mann.

MR. SWAPP.—Bartlett, Green, Pawtucket.

MR. STEARNS.—Varnum, Aiken Avenue.

MR. SCHOOLCRAFT.—Edson, Colburn, Manual Training.

MR. T. J. MURPHY.—Butler, Franklin.

ARTHUR K. WHITCOMB, Superintendent of Public Schools.

Office in City Hall.

OFFICE HOURS.—One hour after the forenoon session of schools, and from 2 to 3 o'clock on Saturday afternoon.

Telephone 566-4.

School Supply Room.

Open 8 a. m. to 12 30 p. m. and 1 to 5 p. m.

Telephone 549-5.

TRUANT COMMISSIONERS.

GEO. F. STURTEVANT. JAMES KELLY. WM. F. THORNTON.

CAMILLE ROUSSIN.

Office in City Hall, Third Floor.

OFFICE HOURS.—Saturday, 2 to 3 o'clock P. M. Other days 4 to 5 o'clock P. M., except during the summer vacation, when the office will be open from 9 to 10 o'clock A. M.

REGULAR MEETINGS OF THE SCHOOL COMMITTEE.

January 30.

February 27.

March 27.

April 24.

May 29.

June 26.

July 31.

August 28.

September 25.

October 30.

November 27.

December 27.

REPORTS.

Report of the School Committee.

In one of the later numbers of a magazine, devoted to literature, science, art and politics, is a paper upon the public schools of America, so full of facts that obtain in our own schools and so replete with suggestions that if carried out in Lowell would be of infinite benefit to our whole public school system, that we feel justified in embodying much that is in the article in question in our own annual School Report.

THE STANDARD OF TEACHERS.

The first essential for the promotion of the welfare of our public school system is to keep up the high standard of its teachers. We are happy to state that in this particular our city has made steady progress during the past year. We have held fast to all that has been accomplished in the work of our training school, and now with the assistance of the normal school we look for increased efficiency in this direction.

THE MERIT SYSTEM.

We thoroughly believe in the merit system, and that our public schools should be subjected to the closest scrutiny in this respect. The tendency in all the departments of civil life to the employment of the best mental skill is growing with each successive year, and it is highly important that those who have our public schools in charge should bear this fact in mind. It should be the desire of our city to constantly increase her interest in this her greatest safeguard. We believe that the most potent influence in the consummation of this object is the school board itself, and men of eminent worth and good ability should always be selected to serve as its members. The public schools of a city are far more important trusts to administer than the state universities, and who shall say that the members of any school board are competent to fill the position of trustee of these institutions?

The effort to confine the size of school boards to one member for every ten thousand of population meets the approval of many of the best educators, although in this event a large portion of time would be required in attending to details that ought to be devoted to the direction of the general policy and work of the schools.

SELECTION OF SCHOOL BOARDS.

Although there is no one method of selecting a school board that is best for all cities, we believe that ward representation should be abolished and that every member should represent the whole city. Nominations from wards and elections at large, we think, would produce better results, for the whole city would then have a voice at the polls in determining who shall represent each ward.

ADMINISTRATION OF SCHOOL AFFAIRS.

In the administration of our public school system there should be an entire separation between the educational part and the business part. There should be an agent for the business department, and our superintendent should devote his whole attention to the educational department. He should be largely intrusted with the making of the course of study and with the selection of such text-books as shall best meet the requirements of the chosen course. He should have such assistance and co-operation from the teachers, especially from the grammar masters, as to make a text-book committee unnecessary. The making of a course of study is the work of an educational expert. The more intelligent a School Committee the more the members shrink from such a respon-

sibility. There must be more concentration of responsibility and consequently of authority in the administration of school affairs. "One man power" becomes dangerous only when it is not linked with "one man responsibility."

FINANCIALLY INDEPENDENT.

Where the school board is elected directly by the people and is, therefore, directly responsible to the people, it ought to be financially independent of the rest of the city government. It ought to have charge, not only of the schools and teachers, but also of the school-houses and janitors. The City Council ought to have no authority to determine how much money is to be spent on schools and school buildings. This is the only solution of the problem of securing sufficient school room for our school population.

NOT A STEPPING STONE TO OTHER PUBLIC OFFICES.

In no sense should our School Board be considered as an approach to other public offices. Ambitious politicians should be eliminated so far as possible from our School Committee. Only those whose tastes lie in the direction of the refined, whose minds are ever on the alert to strengthen the understanding of the children and whose sym-

pathies are easily excited to assist and support our teachers in their endeavors, should be chosen to guide and guard the affairs of our public schools. Fortunate is the child whose school life is spent in a city where the schools are absolutely free from every adverse influence; where an inferior book is at once displaced for a better when a change seems desirable; where there is no demand for "home talent" that leads to a system that is very baneful; where teachers are employed who come from any part of the country, the only questions asked being such as relate to their qualifications and efficiency.

We have here enumerated for your consideration some of the many needs of our schools as we look at them, trusting that early in the new year our School Board will take note of our suggestions and adopt any of them that in their judgment will aid in keeping the Lowell schools to the highest standard attained in the State.

Respectfully submitted,

FRANK K. STEARNS,
GEO. F. THOMAS,
HUGH F. FARLEY.

Report of the Superintendent of Schools.

OFFICE OF THE SUPERINTENDENT OF SCHOOLS,
DECEMBER, 31, 1898.

GENTLEMEN OF THE SCHOOL COMMITTEE:

In accordance with the Rules of the School Committee I have the honor to submit the following as my report for the year 1898:

SUMMARY OF STATISTICS.

Value of real and personal property	\$70,977,303
Population, estimated, (84,359 by census 1895)	90,000
Number of polls	24,526
Decrease for the year	614
Number of children between five and fifteen years of age, May 1, 1898	12,989
Ward One, 843; Ward Two, 1131; Ward Three, 1281; Ward Four, 1611; Ward Five, 1187; Ward Six, 1623; Ward Seven, 2414; Ward Eight, 1620; Ward Nine, 1279.	
Number of public schools	46
One High, nine Grammar, thirty-three Primary, two Mixed, one Training.	
Number of Kindergartens	12
Number of public school buildings	52

Number of school rooms in actual use	266
High, 28; Grammar, 111; Primary, 111; Mixed, 3; Kindergarten, 13.	
Number of elected teachers employed, Dec. 31, 1898	273
High School, eight men, sixteen women.	
Grammar Schools, nine men, ninety-seven women.	
Primary Schools, one hundred and six women.	
Training School, four women.	
Mixed Schools, three women.	
Kindergartens, twenty-two women.	
One supervisor of kindergartens.	
Two teachers of penmanship.	
One teacher of drawing.	
One teacher of music.	
One teacher of sewing.	
One teacher of elocution and physical culture.	
One military instructor.	
Number of temporary teachers employed.	39
Number of teachers of Evening Schools, term of 1897-'98	152
Whole number enrolled in Evening Schools, term of 1897-'98	3,980
Whole number enrolled in day schools	12,345
Whole number enrolled in Kindergartens	1,045
Average number belonging to day schools	9,777
High, 753; Grammar, 4610; Primary, 4298; Mixed, 116.	
Average number belonging to Kindergartens	478
Average attendance	9,021
High, 721; Grammar, 4295; Primary, 3902; Mixed, 103.	
Average attendance in the Kindergartens	383
Average number belonging to each teacher	40
High, 31; Grammar, 42; Primary, 41; Mixed, 29; Kindergartens, 22.	
Average number belonging to each room	39

High, 27; Grammar, 42; Primary, 39; Mixed, 29.	
Average number belonging to each Kindergarten	40
Average per cent. of attendance	92
High, 96; Grammar, 93; Primary, 91; Mixed, 89.	
Average per cent. of attendance in Kindergartens	80
Average cost of each pupil, for tuition only, based on the average number belonging	\$18.73
High, \$30.77; Grammar, \$16.01; Primary and Mixed, \$16.32.	
Average cost in Kindergartens	\$25.33

RECEIPTS AND EXPENDITURES.

RECEIPTS.

Appropriated and assessed in 1898	\$278,000
Appropriated Jan. 1898 to pay bills of 1897	2,870.83
Total standing to credit of schools	<u>\$280,870.83</u>

EXPENDITURES.

Paid to teachers of Day Schools:—

High School	\$23,967.25
Grammar Schools.—Bartlett School, 8,186.97	
Butler School, 11,008.83	
Edson School, 8,268.62	
Green School, 7,871.77	
Highland School 10,885.31	
A. Lincoln “ 6,546.04	
Moody School, 6,431.29	
Pawtucket School 5,402.13	
Varnum School, 9,464.35	
	<u>74,065.31</u>
Primary and Mixed Schools	65,580.80
Training School	10,918.69
Kindergartens	12,110.75
Special Teachers	<u>5,415.50</u>
Total paid for instruction in day schools	\$192,058.30

<i>Amount brought forward</i>	.	.	.	\$192,058.30
Evening Schools:—				
Teachers			\$12,972.88	
Janitors			1,607.50	
			<hr/>	14,580.38
Drawing School:—				
Teachers			3,921.50	
Janitor			86.00	
			<hr/>	4,007.50
Cost of Supervision:—				
Salary of Superintendent of Schools			3,000	
Office assistant			400	
Truant officers and assistant in supply room			3,522.33	
			<hr/>	6,922.33
Total of Salaries				\$217,568.51
Fuel			13,482.60	
Water			1,654.65	
Gas for day schools			562.20	
Gas for evening schools			1,372.50	
Rents of buildings for school uses			1,150.76	
Bills of Supt. of Public Buildings for repairs			3,052.74	
Repairs, furniture, curtains, etc.			1,751.01	
Text books			5,449.17	
Writing books, drawing books, stationery, etc.			5,278.08	
Rebinding school books			39.83	
Supplementary reading			3,725.59	
Bills of Middlesex County, board of truants			4,204.02	
Manual Training, equipment, etc.			693.88	
Manual Training building			2,759.27	
Printing, including annual reports			772.26	
Kindergarten, equipment and supplies			272.28	
			<hr/>	
<i>Amounts carried forward</i>	.	.		\$46,220.84

<i>Amounts brought forward</i>	.	\$46,220.84	\$217,568.51
Janitors' supplies		956 73	
Board of horses, repairs of wagons, etc.		678.15	
Power for ventilating purposes		998.62	
Electric lighting		485.74	
Rent of telephones		222 43	
Material for sewing classes		154 27	
Pianos, etc.		638 14	
Apparatus and material for High School		1,119.61	
High School regiment		241 60	
High School graduation		335.77	
Training School, graduating exercises, etc.		175 03	
Miscellaneous		3,663.03	
		<hr/>	
Total of bills			\$55,889 96
		<hr/>	
Total expenditures			\$273,458 47
Balance to general treasury fund			7,412.36
		<hr/>	
		<u>\$280,870.83</u>	

SCHOOL HOUSES.

RECEIPTS.

Appropriated and assessed	\$58,733.57
Received from other sources	4,033 68
<hr/>	
Total	<u>\$62,767.25</u>

EXPENDITURES.

Paid for Old Moody School building	\$14,000 00
Janitors	27,019.79
General repairs	21,610 16
Balance carried to general treasury fund	137.30
<hr/>	
Total	<u>\$62,767.25</u>

NEW SCHOOL HOUSES.

Balance on hand Jan. 1, 1898	.	.	.	.	\$2,000
Transferred to Bartlett School	.	.	.	1,000	
Transferred to Carter Street School	.	.	.	1,000	
					<u>\$2,000</u>

ADDITION TO PLAIN STREET SCHOOL.

Balance on hand Jan. 1, 1898	.	.	.	.	\$186.71
Expended	.	.	.	.	155.22
Returned to general treasury fund	.	.	.	31.49	
					<u>\$186 71</u>

BARTLETT SCHOOL.

Balance on hand Jan. 1, 1898	.	.	.	.	\$ 37.88
Transferred from appropriation for new houses	.	.	.	.	1,000.00
Total	.	.	.	.	\$1,037.88
Expenditures	.	.	.	.	<u>\$1,037.88</u>

CARTER STREET SCHOOL.

Balance on hand Jan. 1, 1898	.	.	.	.	\$ 357.91
Transferred from appropriation for new school houses	.	.	.	.	1,000.00
Total	.	.	.	.	\$1,357.91
Expended	.	.	.	.	<u>\$1,357.91</u>

ADDITION TO VARNUM SCHOOL.

Balance on hand Jan. 1, 1898	.	.	.	.	\$17,906 50
Appropriation from general treasury fund	.	.	.	.	14,000.00
Receipts	.	.	.	.	1,130.00
Total	.	.	.	.	\$33,036 50
Expenditures	.	.	.	.	<u>29,882.02</u>
Balance on hand Jan. 1, 1899	.	.	.	.	<u>\$4,154.48</u>

MOODY STREET SCHOOL.

Balance on hand Jan. 1, 1898	.	.	.	.	\$14,117.08
Appropriated from general treasury fund	.	.	.	.	2,200.00
Total	.	.	.	.	\$16,317.08
Expenditures	.	.	.	.	14,710.18
Balance on hand Jan. 1, 1899	.	.	.	.	<u>\$1,606.90</u>

The census of children between five and fifteen years of age, required by state law, was taken this year, for the first time, by the truant officers. These men are so well acquainted in the city, and so used to looking up children, that their superiority to inexperienced enumerators is manifest. So far as I know their work was well and thoroughly done, and they were assisted, and their results were tested, by an enrolment of pupils in all the schools of the city both public and private, so that their reports had every condition in favor of accuracy. The number of children found, however, as compared with the number in 1897, was disappointingly small, 12,989 in 1898 as against 14,432 in 1897, a loss of 1,443. The number of polls in the city decreased 614 in the year, following a decrease of 180 the year before, so that a decrease in the number of children was to be expected, but so large a falling off was not anticipated, nor is it easily explained.

The cost of taking the census in 1897 was \$746, and this sum was saved, in dollars at least, by having the work done in 1898 by the truant officers. On the other hand the men were withdrawn from their usual work, in large part at least, for the two months in which their services are most needed. All cases of truancy or absence reported by teachers were investigated in these months as at other times, but the semi-weekly visits to schools were omitted, and street work ceased for the most part. Whether the saving in money justified the loss of work in May and June is, therefore, an open question. As, however, the census is to be taken in the future in September, by the law of

1898, the question is somewhat changed, and the experiment of having the work done by the truant officers should again be tried, as will doubtless be the case

Despite the large decrease of children in the city as shown by the census the enrolment of scholars in the day schools remains almost the same as last year, and the average number belonging and the average attendance both show a slight increase. The per cent of attendance has fallen from 93 to 92, but how much of this apparent loss is real and how much is due to a change in the state law for making up percentages it is impossible to say. In previous years an absent pupil ceased to be counted as one of the "number belonging" after ten half days of consecutive absence, but the law of 1898 increased the ten sessions to twenty. The scholar, therefore, though absent, must now be counted among the "number belonging,"—the basis for the percentage, twice as long as heretofore, and a lowering of the per cent. of attendance is inevitable. I must say frankly that the change seems to me to have been a mistake, but we feel bound to take the law as we find it, and are trying to loyally obey it, though with many mental protests.

For the first time in the history of Lowell, so far as I know, the school department was given an adequate appropriation for expenses at the beginning of the year, and it has recognized the courtesy by loyally living within it. For the first time, too, in many years, if ever, the department's expenses have been less than in the previous year, the decrease being \$3,928.17. There was the usual increase of about \$2,000 in the salaries paid to teachers in the day schools, a saving of about the same amount in the salaries paid to evening school teachers, a small increase in the expenses of supervision, due to the employment of an additional truant officer, making the total for salaries \$217,568.51 as against \$217,032.96 in 1897, an increase of \$563.55. The decrease in the total, therefore, has been on bills, the greatest being on coal for which \$15,735.38 was expended in 1897 and only \$13,482.60 in 1898. The decrease was not due to burning less coal but to the cleaning out of accumulated stocks at many

schools, and the expense in 1899, with the New Moody street and Varnum addition to provide for, will probably be larger than ever before. Less money by \$3,000 has been expended for text books this year than last, a saving which cannot continue, so that the total expenses for 1899 will probably be at least as great as 1897. An appropriation of \$278,000 will be asked for, this being the same sum given the department in 1898.

SCHOOL HOUSES.

The city now has fifty-two school-houses, most of which are in good condition and ample in size for the pupils to be accommodated. Less money than usual was expended during the summer vacation in new floors and similar needed repairs, and in painting, varnishing, whitening, etc., so that the need of such improvements will be doubly great next year. Several permanent improvements, too, were refused by the Lands and Buildings department for lack of funds, and some such, like an addition to the Manual Training School, sanitaries at Chapel Street, a bulkhead door at the New Moody house, a lunch-room at the High School, etc., were made by the school department, a proceeding of very doubtful legality and only justified by the necessity which knows no law. Two hundred and sixty-six school rooms are occupied every day, and eighteen others are waiting for prospective pupils as follows: Two each at the Moody, Lincoln, Sycamore Street, Billings Street, School Street, New Moody Street and Middlesex Village school-houses, and one each at Lexington Avenue, Chapel Street, Pine Street and Plain Street. These are almost all in houses in the outskirts of the city, and are in no case more than the reasonable provision for a growth which is certain and which, in most cases, is sure to occur in the immediate future.

One new building, the New Moody Street school-house of six rooms in Pawtucketville, has been finished during the year, and an eight-room addition to the Varnum school-house in Centralville was completed for occupancy in September. Both are fine structures and well equipped. By this addition the

Varnum becomes the largest school-house in the city, seventeen rooms, all of which are occupied, though two of them are used for kindergarten instead of grammar school purposes. Architecturally, from the outside at least, the effect of the addition is not pleasing, but within the school is very conveniently arranged, and is giving great satisfaction. A fine assembly hall was added with the new part, electric clocks, telephones, etc., were put in all rooms whether old or new, and the building is now one of the best, and best equipped, in the city. That the addition was needed is proved by the fact, before stated, that all its rooms were occupied as soon as finished.

Several of the primary and grammar school-houses of the city are old and might well be replaced by more modern structures, but none of them is so overcrowded as to make immediate relief a necessity, and the school department will probably ask for the erection of no new building of this class next year.

In the case of the High school, however, the demand for relief from overcrowding is immediate and pressing. The seating capacity of the building is 735 and the number of students to be given seats last September was 789. Some relief was afforded by the use of the Old Moody school building for manual training, it is true, but in addition to those who would naturally be placed in the latter house it was necessary to put there, temporarily at least, some twenty others. To be sent to this old building, across the Concord river and entirely away from the house which is properly considered the habitat of the High school, was naturally felt to be a great hardship, and both students and parents protested vigorously, not to say furiously, in most cases. Every effort possible was made to accommodate them; seats were given to some in the library room, others were given the chair left vacant by every pupil who dropped out of the school for any cause, and all were packed in somewhere in the course of a few weeks, yet the discomfort to pupils, parents and most of all to teachers was not small, and will be greater every year until more room is provided.

Nor is the lack of chairs in which students can sit the only reason for asking for more room. Classes are larger than they should be in many cases, and the introduction of many desirable studies is simply impossible under present conditions. Those high schools of the state which have made the largest gains in membership and in general interest in recent times have done so by the introduction of popular courses in the natural sciences and in stenography, book-keeping, typewriting, etc. The demand for such courses in the Lowell High school is pressing, but for none of them do we have an inch of room in the present building. Already, indeed, one corridor and the assembly hall are in regular use for class work, and yet the needs of the school in this respect are far from being satisfied.

Anticipating this need the city bought, three years ago, a lot of land on the corner of John and Paige streets, within one minute's walk of the present High school, and large enough for a building ample for our needs, and for two years the school department has been asking the City Council to utilize this land by placing upon it the house which we must have some time, and which we ought to have at once. Experience has shown that it usually takes the city two years to erect such a building as is needed, and if begun at once it will not be finished before conditions already uncomfortable will have become well nigh intolerable.

The building needed should be supported by trusses so as to leave the basement open for a drill room for the High school regiment, and should provide rooms at the John Street end for manual training, which will never prosper as it should while located in an old building half a mile away from the rest of the High school, and should contain not only such rooms as are already needed for overflow classes from the present school but such other rooms specially planned for the work of new classes and departments as may be needed to place our school in the forefront of the best and most progressive schools of the state.

SCHOOLS AND TEACHERS.

The school system of Lowell now gives employment to 273 elected and 39 temporary and substitute teachers in day schools and 138 in evening schools, a total of 450. It occupies 266 school-rooms for day schools, 82 for evening schools, cares for more than 13,000 different pupils during the year and more than 10,000 every day in day schools and 2000 more in evening schools. The supervisory force consists of one superintendent, a supervisor of kindergartens, and special teachers of music, penmanship and drawing, while the delivery of supplies, the looking up of truants, the taking of the school census, etc., is looked after by four truant officers.

Following are the changes in the roll of teachers during the year:—

DIED.

	Term of Service.
Lilla J. Greenhalge, Central Street School . . .	27 years.
Cornelia M. Davis, Carter Street School . . .	27 "

RESIGNED.

	Term of Service
Edith L. Monroe, Highland School . . .	13 years.
Katherine L. Walsh, Butler School . . .	3 "
Harriet Bradley, Varnum School . . .	44 "
George R. Carothers, High School . . .	2 "
Maud A. Jones, Moody School . . .	4 "
Mary B. Kent, Bartlett School . . .	39 "
Frank R. Rix, Supervisor of Music . . .	2 "
Edith M. Abbott, Plain Street School . . .	1 "
Helen M. Osgood, Pawtucket School . . .	1 "
Ella L. Pratt, Moody School Kindergarten . . .	5 "
Ellen B. Duckworth, High School . . .	1 "
Mary A. Cronin, Worthen Street Kindergarten . . .	4 "

TRANSFERRED.

Eugenia L. Hogan, from the School Street School to the New Moody Street School.

Fannie A. Hardy, from the School Street School to the New Moody Street School.

Elsie Cragin, from the Lincoln Kindergarten to the Worthen Street Kindergarten.

Rosemary Lennon, from the Worthen Street Kindergarten to the Lincoln Kindergarten.

Louie I. Smith, from the Moody Kindergarten, No. 2, to the Pine Street Kindergarten.

Edith Howitt, from the Moody Kindergarten, No. 2, to Moody Kindergarten, No. 1.

Hortense Tabor, from the Training School Kindergarten to the Pawtucketville Kindergarten.

Maria W. Roberts, from the Varnum School to the Bartlett School.

Carrie E. Erskine, from the Moody School to the Bartlett School.

Grace B. Alvord, from the Pawtucketville Kindergarten to the Bartlett Primary.

Helen A. Drury, from the Middlesex Village School to the Central Street School.

Mary E. Walsh, from the Varnum School to the Bartlett School.

ELECTED.

John A. Donovan to the High School.

Thomas F. Fisher, to the High School.

Charlotte M. Murkland, to the Bartlett School.

Fannie M. Spooner, to the Bartlett Primary.

Frederick O. Blunt, Supervisor of Music.

Ida L. Samuels, to the Moody School.

Nellie C. Mahoney, to the Moody School.

Goldie M. Gardner, to the Pawtucket School.

Alice M. Magoon, to the Varnum School.

Mary A. Fay, to the Varnum School.

Lena May Robinson, to the Varnum School.

Gertrude C. Ring, to the Carter Street School.

Emily S. Abbott, to the Plain Street School.

Gertrude L. Sponholtz, to the Highland School.

That death loves a shining mark was never better exemplified than in the teachers taken from us this year. Miss Greenhalge and Miss Davis had been teaching a good many years, but neither was an old teacher. Such teachers as they will never grow old as teachers, whatever they do as persons. Each gave her whole heart to the work; each had the undivided love of all her pupils; each was eminently successful; each died regretted by a host of friends. Few of us have their exceptional ability; their spirit we may all have if we will, and certainly the record of their lives can hardly be surpassed as an incentive to highest endeavor.

The resignations were nearly all those of ladies who have married, and are, I suppose, to be congratulated. All were good teachers whom we were sorry to lose. Misses Bradley and Kent retired to take a well-earned rest after a lifetime of faithful work, and the best wishes of their friends, a term which includes all who know them, follow them. Mr. Carothers resigned to accept a better paid position elsewhere, and Dr. Rix had the high honor of being called to supervise the supervisors of music in one department of the schools of Greater New York, at a salary nearly or quite three times that which he was getting in Lowell.

HIGH SCHOOL.

The High school has increased its average number belonging from 708 to 753 in the past year, a larger proportional gain than has been made by any other school of the city, and notwithstanding its cramped quarters is doing its usual excellent work. A Lowell boy led his class at Dartmouth the first half of last year, another did equally well at West Point, while a Lowell girl won the same honor at Vassar. Of the eight or ten Lowell boys who went to Dartmouth last September everyone is in the first third of his class, and the same is true of the equal number who went to the Institute of Technology. Few high schools in the country, indeed, have better records or stand better with higher institutions than does the one in Lowell.

One of the minor problems of the school, which has not as yet been solved satisfactorily, is that relating to a mid session lunch. The committee responded to the demand for a lunch counter very soon after the school occupied its present quarters in 1893 by allowing two men to sell food to the students at recess. The food furnished, however, was mainly composed of sweets, and the committee transferred the privilege of catering to another party under conditions which enabled them to dictate the bill of fare. The quarters provided, however, being only a counter in the basement, were unsatisfactory, and some of the food offered was still of a questionable character in the minds

of many parents. It became obvious that one of two things should be done; either do away with the lunch altogether, or give it better quarters and improve its character. Before deciding this question the parents of all the students were consulted by means of a circular letter. So great was the interest taken in the subject that over five hundred parents answered the letter, and to the further surprise of the committee more than 90 per cent. were in favor of a lunch, and about 85 per cent. were willing to furnish their children money with which to patronize it. As to the quality of the lunch they were almost equally unanimous. Soups, rolls and butter, sandwiches, milk and chocolate, with fruit in season, were almost universally acceptable, while hot frankforts, sweets of any kinds, and drinks of even the most strictly temperance qualities, if furnished to be drunk from bottles, were as universally rejected. With such an expression of opinion before them the committee felt that but one course was open to them. A new, clean, tasteful and commodious lunch room has been constructed in the basement; a gas stove, refrigerator, etc., have been put in place, and the experiment of furnishing a lunch of the kind demanded, under favorable conditions, will soon be tried.

The graduating exercises were held in the hall of the High school, Wednesday afternoon, June 22, and in the Opera House Thursday evening, June 23. In accordance with custom the programme, the names of the graduates, and the names of the Carney medal scholars are herewith given:

Wednesday Afternoon.

PROGRAMME.

1. CHORUS, "Let Our Voices Be Glad," *Lecocq*
2. "COLERIDGE'S ANCIENT MARINER,"

Written by Helen D. Swain

MARGARET S. JAMIESON.

3. BURKE'S SPEECH ON CONCILIATION WITH AMERICA,

Written by Clinton H. Robinson

HENRY A. FERRIN.

4. "THE VISION OF SIR LAUNFAL,"

Written by Florence A. Manahan

ANNIE V. DONOGHUE.

5. SEMI-CHORUS, Swing Song, *Lohr*
6. SIR ROGER DE COVERLY,
KATE W. SNOW.
7. EXTRACT FROM MEMORIAL ADDRESS, *John D. Long*
LLOYD B. HAWORTH.
8. THE FLIGHT OF THE KALMUCKS,
BERTHA L. JOHNSON.
9. EXERCISE, "Its History and Its Need."
ARTHUR W. MCLEAN.
10. CHORUS, Waltz Song, "The Lawn Party," *Lecocq*
11. THE TEARS OF TULLIA, *Edgar Fawcett*
FLORENCE E. WILLIAMS.
12. ENGLAND AND AMERICA,
JAMES W. MUDGE.
13. AKERATOS, *Thomas D. English*
ETHEL T. NEALE.
14. ADMIRAL NELSON,
HERBERT D. BIXBY.
15. CHORUS, The new "Hail Columbia," *Chadwick*

Thursday Evening.

PROGRAMME.

1. MARCH, "America Forever,"
AMERICAN ORCHESTRA.
2. OVERTURE, "Creme de la Creme," *Tobain*
AMERICAN ORCHESTRA.
3. CHORUS, "Let Our Voices Be Glad," *Lecocq*
4. SALUTATORY, Oliver Goldsmith,
BRIDGET KATHERINE SMITH.
5. CHORUS { *a.* Swing Song, *Lohr*
 b. The new "Hail Columbia," *Chadwick*
6. ADDRESS,
HON. GEO. F. LAWTON.
7. CORNET SOLO, "Souvenir Waltz," *Heea*
R. MCDANIEL.
8. PRESENTATION OF PICTURE BY CLASS OF 1898.
THOMAS J. O'DONNELL, President Class of '98.
- ACCEPTANCE FOR THE SCHOOL,
ANDREW G. SWAPP, President of the School Committee.
9. VALEDICTORY, Success,
ROBERT HENRY ELLIOTT.
10. CHORUS, "The Lawn Party," *Lecocq*

11. PRESENTATION OF CARNEY MEDALS,
SUPT. A. K. WHITCOMB.
12. HONORABLE MENTION MADE OF THOSE WHO HAVE AT-
TAINED A SCHOLARSHIP RANK OF 90 PER CENT.
13. MEDLEY OVERTURE, "A Cluster of Peaches," . . . *Beyer*
AMERICAN ORCHESTRA.
14. PRESENTATION OF DIPLOMAS,
His Honor the Mayor, JAMES W. BENNETT.
15. SINGING OF CLASS ODE, *Words by Lillian Offutt*

Our school life is over, the moment draws near
When its ties we must break with regret;
Its joy and its sorrow, its hope and its fear,
In the future we ne'er shall forget.

As boldly we enter the battle of life,
Success will our efforts attend,
If we but remember, all through the long strife,
That our motto is "Look to the end."

Our country's dear colors we choose for own;
In them may we ever be true.
While others are battling 'gainst Tyranny's throne,
We battle our duty to do.

Then, help us, O Father, to do it aright,
And arm us with honor and truth,
With motives as pure and courage as bright
As in the lost schooldays of youth.

16. AMERICA—The audience is requested to join with the School
in singing.
17. FINALE, March, "The American Republic," . . . *Thiele*

Graduates for 1898.

FOUR YEARS' COURSE.

Henry Allison Ames	Louise Alice Benoit.
Frederick William Barrows	Carrie Maude Eunice Black.
Herbert Dallas Bixby	Lovina Rice Butterfield.
Walter Clinton Bruce	Annie Wilson Chase.
Arthur Frank Butler	Anna Taft Coburn
Edgar Frank Cilley	Avis Josephine Coburn.
Timothy Lawrence Coleman	Floy Cutler.
Charles Frank Dupree	Edith Marie Dempsey.
Robert Henry Elliott	Annie Louise Hall.
Henry Abbott Ferrin	Margaret Woodburn Hall.
Grant Ford	Mary Isabel Halloran.
James Patrick Henry Gookin.	Ethel May Harmon.

Frederick Daniel Aloysius Gorman	Bertha Louise Johnson
Lloyd Batchelder Haworth.	Katherine Aloysius Kelley
Arthur Leon Kelly.	Anna Stasia Madigan.
Thomas Lyons Kelley.	Georgenia Eva Magoon.
Alfred Rufus Kennedy.	Flora Amelia Manahan
Charles Percy Littlehale.	Sarah Jane Munson.
Arthur Winfield McLean.	Lillian Offutt.
John Joseph Murray.	Edith Evelyn Philbrick
James Wiswell Mudge.	Essie Elizabeth Roche.
Edwin Eugene Nelson.	Ardelle Wilson Roper
Thomas Joseph O'Donnell.	Bridget Katherine Smith.
Henry Church Pillsbury.	Kate Wilson Snow.
Clinton Hiram Robinson.	Linda Osgood Stearns
Walter Owen Teague	Helen Damon Swain
Channing Whittaker, Jr.	Joseph Garfield Wright
Charles Caswell Wilson.	

THREE YEARS' COURSE.

Thomas Joseph Ahern.	Elizabeth Anna Conway.
George Bates Allen.	Annie Marie Devine.
Walter Samuel Bean.	Annie Verecunda Donoghue
Alfred Charles Bertrand.	May Edna Flanagan.
Frank Robert Brady.	Charlotte Abbie Flemings
John Joseph Breen	Alice Josephine Foy
Edward Joseph Boyle.	Mary Ella Freeman
Alfred Samuel Cady.	Florence Hazel Gerald
Thomas Edward Carr.	Mary Louise Galley.
William Matthew Clark.	M. Ethelyn Grierson.
Roscoe Lee Coggeshall.	Marion Sadie Hamblett
Joseph Henry Connors	Grace Mildred Hanson
Thomas Henry Donahue	Alice Clark Hutchinson.
Harvey James Gamble	Grace Adelaide Hylan
Archibald Robert Gardner.	Margaret Strang Jamieson
Nelson Smith Gray	Lizzie Eola Jewett
Reginald Loomis Haggett.	Delia Angela Kearns.
John Michael Haggerty	Lillian Priscilla Leith
Clayton Foster Jennison.	Margaret Walker MacDonald
Willoughby Joseph Kingsbury	Mary Katherine McLaughlin
Wilfred Sidney Laporte.	Blanche Annie Miller.
John Charles Laughlin	Ellen Gertrude Moran.
Joseph Hector Lavallee.	Ethel Alice Morse.

George Frederic Lawson.
Abraham Bennett Leavitt
Peter Henry Monahan.
Francis James Murphy
Joseph Ignatius O'Brien

Ada Mudge.
Anna Louise Murphy.
Ethel Torrey Neale
Margaret Louise Noyes
Lillian Gertrude O'Malley.

CARNEY MEDAL SCHOLARS

Robert Henry Elliott.
James Wiswell Mudge.
Henry Abbott Ferrin.

Bridget Katherine Smith.
Bertha Louise Johnson:
Flora Amelia Manahan

GRAMMAR AND PRIMARY SCHOOLS.

No change has been made in the number or location of the grammar schools, except that the completion of the addition to the Varnum has made it again possible to collect under one roof the pupils who were farmed out the first half of the year in primary buildings or rented rooms all over Centralville. Fifteen of the seventeen rooms of the building are occupied by the grammar school which now has conditions as favorable to comfort and success as any in the city. The removal of the primary school from the Pawtucket grammar school building has also given space to bring the pupils who have been located in the assembly hall for the last two years down to a room with their mates on the floor below, and the election of one more teacher marks another epoch in the growth of the school. The Pawtucket has doubled in rooms and more than doubled in number of pupils since its present master went there eleven years ago.

Of primary schools, that at School street has been closed and its pupils transferred to the Bartlett to accommodate the Normal school, and the Mammoth Road school has gone, all but one room left behind to accommodate some children in the matter of distance, to its new quarters in the New Moody street building, the three classes of the old school being expanded to five in its new quarters. This relieves the last case of serious

HIGH SCHOOL GRADUATES IN THE THREE YEARS' COURSE,

CONCLUDED FROM PAGE 34.

Stanislaus Patrick O'Brien
Maurice Henry Powers
William Melbourne Prescott

William Marcellus Rice
Walter Rushforth
George Aloysius St. Leger
Ernest Sibley Strout
Albert Eugene Thurston
James Robinson Wilkinson
Raymond Frank Wolcott
Lucy Jane Bills
Grace May Blackington
Margaret Beatrice Callahan
Estelle Bancroft Cheney
Lila Estelle Clark
Leslie Cora Coggeshall
Lillian Burnham Conant
Nina Benedict Wood

Katherine Gertrude O'Sullivan
Grace Louise Peirce
Esther Marie Rackliffe
Ada Mary Reed
Nellie Frances Riley
Mary Evangeline Roche
Mabel Rosander
Mary Ignatia Saunders
Mae Folger Stevens
Hannah Elizabeth Sweeney
Daisy Orvilla Tanner
Ethel Ham Tilton
Ethel Blanche Tuttle
Gertrude Veronica Vining
Georgiana Frances Walker
Aimee Lizette Webster
Gertrude May Wilcox
Florence Ethel Williams
Sybil Lydia Wilson

overcrowding, and most of the schools of the city, both primary and grammar, are now in a very comfortable condition both as to quarters and numbers. With better facilities teachers are doing better work, and the quality of the instruction was never, I think, better than at present.

PROBLEMS IN PRIMARY EDUCATION.

Among the many problems which are pressing for solution are three which seem to me important enough to deserve a few words of comment. They are (1). How to make the pupils of our school self-reliant, independent, thinkers. (2). How to prevent the confusion of mind and mental degeneration which comes from a smattering of many things, and to develop the mental power which comes from definiteness of aim in learning a few things well; and (3). How best to mitigate the evils of close grading.

1. Fifty years ago many schools were kept rather than taught, and the work of the teacher was largely confined to preserving order, seeing that scholars studied continuously on lessons they were set to get unaided, and testing results by hearing recitations. This method may have been death to the weaklings who could not advance without assistance, but a better method of developing sturdy thinking in those strong enough to stand it could hardly be devised. The new education, however, has changed all this. Schools of a single grade have replaced the ungraded schools of our fathers, and have given to teachers the opportunity so much desired of spending the most of their time in teaching. Pupils in many schools are led, guided, and assisted all the time. Their advance is undoubtedly much more rapid than before; they learn many things not in the books and of which they would otherwise remain ignorant, but with these unquestioned advantages there comes also, sometimes at least, a loss of power in independent thinking for which all the advantages named but poorly compensate. Within a few months two of our ablest and most

experienced grammar masters have told me that there had been for ten years a steady deterioration in mental grasp and reasoning power in their ninth year classes. Their pupils know many more things than formerly, but lack the power to use their knowledge and apply it to new conditions, and both masters attribute this condition to the fact that teachers are doing too much of the work. The temptation to do this is very great. There is much to be done, a seemingly overwhelming amount in most cases; pupils can get over twice as much ground in an hour if the teacher works with them, and so the teacher assists nearly all the time. The result is great apparent progress, but sometimes a loss rather than a gain of mental power. Pupils continuously carried have no occasion to walk, and they rarely try to do so. The evil is a serious one, but the remedy is obvious, though not perhaps easy. It is simply to let the scholars alone a part of the time, and to insist that they do some things for themselves. The practical way of reaching this is to have at least two divisions in every room in the severer studies like arithmetic, grammar, history, etc., so that one division can study while the other is reciting. It is easier for the the teacher to have scholars all together; it is better for the pupils to be separate; what is duty for the teacher is too plain to need to be stated.

2. A few weeks ago I had the pleasure of an hour's discussion of school topics with an association of clergymen. They were, of course, men of ability, several of them members of school committees, and the most of them parents of children now in school. They were all kindly and appreciative critics, giving the schools of the state much praise and little blame, but there was one point on which their criticism was practically unanimous, and this, I was a little surprised to find, was the alleged fault of trying to teach too much! It was not suggested that any of the things taught are not good and desirable for children to know, but it was asserted that children's minds are being thrown into confusion and broken down by the almost infinite number of things about which they are expected to

learn. A little of all the sciences, something of the history and the literature of all nations, a little of art,—surely every pupil would be the better for knowledge on all these subjects, but these men asserted that it is possible to have too much even of good things, and that the effort to obtain a smattering of everything would only convert the child into a walking encyclopaedia if successful, and if unsuccessful would very likely be ruinous not only to health of body but to clear thinking and mental vigor.

That there is some foundation for these criticisms there is, I think, no doubt, but the remedy, again, is obvious and ought to be easy; it is simply to hold fast to the few, the very few, essentials, and to present other subjects not as things to be mastered and reproduced in tests but as matters of rest and recreation. The dessert should be the most enjoyable, and may indeed be, in one sense, the most important part of the dinner, but to make it enjoyable and to give it its highest value requires for it a treatment quite different from that which is accorded to the substantials which precede it, and much the same distinction should be made by the teacher in the presentation of mental food. What, then, are the essentials? In attempting to answer this question I do not for a moment propose to discuss the general proposition with which Spencer begins his great work on education: “What knowledge is of most worth?” a question on which the wisest differ most widely, but only the limited phase of the subject which relates to the matter to be taught in primary and grammar schools.

First then comes reading, silent and oral. To get thought from print and to fittingly voice that thought are first essentials, not only as acquisitions of value in themselves but as the necessary conditions of success in the study of everything else. To reading, therefore, too much time and attention can scarcely be given; whatever else is omitted reading should always be kept to the front; promotions should be based upon it more than upon anything else, and whatever else may be taught well the school is a failure in one of its most important functions which does not teach children to read well.

Next to reading in importance comes the ability to use correct, terse, idiomatic English in speaking and writing. The old adage which declares that men are judged by deeds rather than words is not true. Men are judged mainly by what they say and the way in which they say it, and the man who can express himself well with voice and pen has an immeasurable advantage over the one who is uncouth in speech and slovenly in writing. "Make every recitation a lesson in language" usually means a command to interrupt, humiliate and confuse the pupil every time he breaks a rule of grammar while reciting. It ought to mean for the pupil an opportunity to recast his statement again and again if need be, and, possibly to commit it to writing if necessary to get it into the best possible form. Pupils are taught "language" for nine years below the High school, and if they cannot at the end of this time speak and write respectably they must have been exceptionally dull at first or have had poor teaching somewhere along the line. Anyway, proficiency in this respect is the second essential for which our schools exist.

A third essential is a limited but ready and accurate knowledge of the mechanics of number. I agree that number should be taught at first objectively, that all processes should be illustrated or reasoned out, but after all this, or along with all this, there must be, in my opinion, a very large amount of mechanical drill. To add rapidly and accurately and to have a correct and instantaneous knowledge of the relation of the numbers which compose the multiplication table are matters of more importance than a knowledge of conic sections, as I can testify from experience. Teachers of any grade below the High school desire most in the pupils they receive at the beginning of the year an ability to read well, to recite in good form orally or in writing, and to use the fundamental operations of arithmetic readily and accurately. Possessing the first and second geography and history are but pastimes, and possessing the third advance work in arithmetic is easy. The attainment of these ends is the work of the school; these few things should

be known, and should be done, well. Definiteness and point in teaching will develop mental power and clear thinking, and will prepare the pupil to enjoy and to profit by the wealth of literature, of history, of biography, of science, of art, and of nature's glories and uses, which the good teacher will be sure to present, not as tasks but for recreation and as a genuine "enrichment of the course."

3. That close grading is an evil is everywhere conceded. That children of the same class differ widely in age, in ability, in health, in regularity of attendance, and in a score of other particulars which affect their progress in school, is a fact patent to everyone, and that a system which holds children so differing in one compact mass through the months and years of a whole school course must work injustice to some is also manifest. No subject is exciting more interest among schoolmen than this, and devices to mitigate the evils of close grading multiply on every hand. Among the best known is that of Cambridge, which allows every class entering the grammar school to divide itself on lines of progress into two divisions, one of which will complete the course in four years, while the other will require six years to do the same work. Obviously the boy of the first class will be at the same point in two years that a slower boy who entered one year before him will have reached in three years, and at this point they can, if they should choose, change places so as to both graduate in five years. The plan, therefore, gives an opportunity to every pupil to graduate in four, five or six years in a regular course. In four of the six grades there must be, of course, two separate classes in each room. Elizabeth, N. J., has tried for more than ten years the plan of dividing the pupils of each room into as many divisions or classes, usually not less than four nor more than seven, as is found to be necessary to bring those of like ability together. Each division goes forward as fast as it is able, and as some division can be found, or made, to fit every scholar there can be no put back or doubly promoted pupils. Supt. Search at Pueblo, Cal., went to the limit in this direction,

and had teaching purely individual. In Fitchburg the pupils capable of doing double work and those needing special help to do average work are put together in ungraded rooms, with about twenty scholars to the teacher, and each is helped to do that for which he is fitted. Malden has the pupils of any given grade who seem capable of more rapid progress omit some work like music, drawing, etc., supposed to be less important, and take, in the room of the next grade, advanced work in the more difficult subjects. When any pupil so privileged proves his fitness to go on with the next grade he is allowed to do so. Several cities employ special teachers to give extra help to pupils who need it, going from room to room for this purpose, and Supt. Van Sickle of Denver, Col., has pupils who have mastered the work in hand sooner than their mates excused from further recitation in a given subject and given some extra work in another line. By this plan the class presents an even front, but those who are abler and who work harder get more, which is, of course, the important thing. One of Worcester's best grammar masters develops his work with the whole class, but grades the tasks for the pupils according to capacity. In arithmetic, for instance, he will offer to those who can do them a set of difficult problems; to others a set of easier ones, and to those who cannot do these a third and still easier set, all, of course, on the same subject. However good this might be for the pupils it entails too much work on the teacher to soon become popular, I fear.

In everyone of the plans thus outlined there is, I believe, some merit, and the same would be true of many others for which space is lacking. I have not, however, thought it wise to impose any one of them, or any patent plan of my own, upon the teachers of Lowell. All would fail in the hands of a poor teacher, while teachers observing enough to note differences, intelligent enough to correctly measure these differences, and conscientious enough to place the good of their pupils above their own comfort, will reach the desired result anyway. This has been done in large degree ever since I have known anything of

the school work of the city, and doubtless long before that time. The evils complained of are not as bad, in Lowell at least, as excited orators assert. Some injustice, however, there undoubtedly is; the remedy lies with the individual teacher, and to her I confidently appeal.

All the foregoing plans, by the way, assume that the course should be in the main a uniform one, and that all pupils should reach, approximately at least, the same standard for promotion. The deeper problem still as to whether either the course or the standard should be uniform is left untouched. I am very willing to place myself on record as answering this question in the negative. That children differ widely, and that each should have exactly the kind and amount of education for which he is fitted seem to me to be self-evident propositions. Something in this direction every teacher can do, and no course of study, uniform examination, or rigid standard of promotion should stand in the way. With the knowledge we now have, however, and the facilities for working which we now possess, the full fruition of our wishes in this respect is, I confess, a problem past my solving. If we cannot, however, reach our ideals all at once we can at least work towards them, and to this task, too, I invite every teacher.

TRAINING SCHOOL.

The corps of teachers at the Training School remains the same as last year, and the same excellent work is being done. As a school for children it consists now as for several years past of nine grammar and three primary rooms in the Colburn and Charles street buildings with an average number belonging of 473. Most of the teaching is done by pupil teachers at a nominal salary, thus reducing expenses, but this reduction is offset by larger sums paid for supervision (a principal and three assistants being employed where the average grammar school would have only a principal) so that the expenses of the school are about the same as in other grammar and primary schools of the same size.

As a school for the training of teachers the school has had in 1898 thirty-two students, of whom twenty-four graduated in February and June, leaving only eight in service at the present time. None have been received during the present year, the committee having decided to give the preference in the future to graduates of the State Normal School at Lowell, or to graduates of colleges, and to wait until graduates of the Normal School are available before receiving another class. For classes received on such a basis the course will be shortened from two years to one, and a salary, probably \$200, will be paid to the students. If satisfactory arrangements could be made with the Normal School it would be of great advantage both to the Training School and to its future students to have a part of the next class begin work in the spring or summer of 1899. If this is not done the school should open in September with experienced teachers in a large proportion of its rooms to prevent the confusion and loss to pupils which would be inevitable if all its classes were to be taught from the first by new teachers wholly unacquainted with the school.

Following are the names of the graduates during the year:—

CLASS OF FEBRUARY, 1898.

Agnes Bailey.	Evangeline C. Demers.
M. Josephine Donehue	Bertha MacCue
Addie E. Edwards.	Flora Abbey Owen
Maud E. Green	Florence E. Rowell
Margaret F. Howe	Alice D. Sunbury
Elizabeth D. Hovey	Mary G. Tunny.
Harriet L. Wheeler.	

CLASS OF JUNE, 1898.

L. Blanche Brigham	Margaretta I. Foye
Mabel Edna Brown.	Julia Anne Kenney.
Etta Genevieve Burns.	Katharine Law.
Mary Isabel Dame.	Sarah Frances McCort.
Anna J. Devine.	Elizabeth T. Moore.
Annie Louise Murphy.	

KINDERGARTENS.

The number of kindergartens in the city remains the same as last year, the only changes being the uniting of the two in the Moody school-house and the opening of one new one at Pine street.

Three young ladies, who began study in the city's kindergarten training school in February, 1897, entered the State Normal School in September of the same year, and graduated from the latter school in June, 1898, have been given certificates of the fifth grade, entitling them to teach in kindergartens in Lowell, as follows:—

S. Alice Knapp.
Ethel Baker.

Hortense M. Lamere.

MANUAL TRAINING.

At the beginning of the year the city was renting the old Moody school-house for manual training purposes, but in April the building was purchased at a cost of \$14,000, and is now known as the Manual Training Building. An addition to it has been erected thirty-one feet wide, sixty-three feet long on one side and sixty-seven on the other, and two stories high, covering every inch of available ground. A forging plant of twenty-four Sturtevant forges with underground draft, blower, seventy-inch steel plate exhaustor, fan, countershaft, pulleys, belts, etc., has been purchased for \$720, all to be in position ready to start. A motor to cost \$275 has been contracted for, but is not in position at this writing. The total cost of building, equipment and material for the year has been \$3,453.15. Our plant so far as we have gone is an excellent one,—not surpassed indeed in the state. It needs to complete it lathes for metal working, and a dozen more wood-turning lathes to go with the dozen we already have. Those for wood must be procured in 1899, but those for metal will not be needed until a year later.

The number of students entering the High School in September who elected manual training was forty as against four-

teen the year before. One has since left the High School, and four upper class girls are now doing first year's work in manual training, increasing the class to forty-three. The second year class numbers twenty-one. Of the third year class but two remain. They should regularly have taken forging this year, but the forges not being ready in September they were put at third year work, the one lathe for metal working and the Walker grinder which we have furnishing the needed equipment, and can take forging with the third year class next year.

As before stated our manual training plant is now in excellent condition as far as we have gone, and as far as is at present needed, and the number of students to elect manual training is likely to increase. The department, however, can never prosper as it should while located so far from the building of the High School of which its students form a part. The time lost and the confusion incident to the going back and forth between the two buildings are perpetual annoyances to pupils and teachers. The use of the old Moody school-house for manual training purposes was a mistake in the first place, made necessary by the fact that we could get no other place. We have purchased all material with a view to moving it to a better place when one becomes available, but the money put into repairs on the old building is mainly wasted. Economy as well as the good of the school requires that we get into permanent quarters on the lot now owned by the city so near the present High School building as to be practically a part of it just as soon as possible.

EVENING SCHOOLS.

No change has been made in the past year in number or character of the evening schools, or of the evening drawing school. Following are the records of attendance, etc., with the names of the graduates of the evening High School:—

Summary of Attendance.

FOR THE TERM 1897-98.

SCHOOLS.	Number of Teachers at Opening of Term.	Number of Teachers at Close of Term.	Whole Number on Time Books.			Average number Belonging.			Average Attendance.			Per Cent of Attendance.
			Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
High.....	18	18	564	382	946	332	186	518	238	185	423	82
Aiken Ave.....	5	5	78	40	118	39	32	71	45	30	75	60
Bartlett.....	16	16	....	233	233	....	205	205	....	198	198	94
Butler.....	7	4	130	18	148	60	12	72	49	10	59	80
Colburn.....	12	5	175	46	221	82	20	102	73	19	92	80
Edson.....	8	6	199	41	240	65	29	94	51	26	77	82
Franklin.....	11	9	121	83	204	86	57	143	69	51	120	84
Green.....	22	20	664	....	664	327	....	327	297	....	297	91
Hebrew.....	1	1	38	....	38	38	....	38	12	....	12	33
Mann..	19	15	324	....	324	190	....	190	154	....	154	95
Man'l Training..	5	4	55	70	125	22	40	62	15	33	48	76
Pawtucket.....	3	1	38	7	45	15	3	18	13	3	16	88
Varnum.....	6	6	122	55	177	62	56	118	53	49	102	86
Totals.....	133	110	2508	975	3483	1318	640	1958	1069	604	1673	83

GRADUATES, CLASS OF 1898.

REGULAR THREE YEARS' COURSE.

Mabel Josephine Andres.	Thomas Frederick Barnes.
Daisy Brennan.	Walter Champney Coburn.
Cora Estelle Burton.	Frederick Dugdale.
Nellie Aloysious Craig.	Albert Farmer Dole.
Mary Ann Crowe.	Charles Joseph Greely.
Caroline Agnes Davidson.	Thomas Griffin.
Maggie Donoghue.	George Leo Hunt.
Elizabeth Vercunda Kennedy.	Walter Jewett.
Katie Lynch.	Harry Maden.
Laura Mary LeBrum.	Andrew William Mowatt, Jr.
Mary Elizabeth McMahon.	Frank Henry McCluskey.
Mary Josephine Quinn.	Harry Francis Rogers.
Margaret Josephine Sherry.	Joseph Cornelius Sullivan.
Alice Vercunda Teague.	Ora William Smith.
Blanche Aloysia Wood.	Theodore Frederick Selzam.
John M. Williams.	

CHEMISTRY.

THREE YEARS' COURSE.

John James Cheetham.	James William Myers.
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STENOGRAPHY AND TYPEWRITING.

TWO YEARS' COURSE.

Edith Elizabeth Buchanan.	Alice Frances Roach.
Harriet Frances Fox.	Harriet Louise Scott.
Lewis Nathan Gilman.	Christopher Senior.
Helen Teresa Joyce.	Bertha Alice Banford.
Ada Popplewell.	Margaret May Lynch.

Evening Drawing School.

FOR THE TERM 1897-98.

CLASS.	Number of Teacher at Close of Term.	Whole Number on Time Books.			Average number Belonging.			Average Attendance.			Per Cent. of Attendance.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
Architectural.....	4	72	....	72	59	....	59	42	....	42	71
Free-hand.....	5	102	81	183	59	53	112	43	39	82	72
Machine Drawing .	4	105	....	105	83	....	83	67	...	67	80
Modeling.....	4	58	38	96	25	28	53	25	21	46	87
Practical Design.....	2	20	21	41	14	8	22	11	7	18	82
Totals.	19	357	140	497	240	89	329	188	67	255	78

In conclusion I wish to give due credit to the school committee, teachers and truant officers whose faithful services and hearty cooperation have given to the past year whatever of success has been achieved. In particular I want to express something of the loss to the city and of my own personal loss which came from the death last October of Mr. John F. Williams, for thirteen years a truant officer and for the last half of that time supply agent and in many important particulars assistant superintendent of schools. Mr. Williams was a model man for the place, able, faithful, discreet and conscientious. Of "office hours" he knew nothing; his idea of his duties was to hunt for more work rather than to do only that which he had been told

to do, and to get his work done no matter how much time was required to do it. Always genial and courteous, always willing to discommode himself to any extent to accommodate others, he had grown into a position in which his services were invaluable, and his place cannot be filled.

Respectfully submitted,

A. K. WHITCOMB,

Superintendent of Schools.

Courses of Study.

TIME TABLE

In minutes, per week, for the

PRIMARY AND GRAMMAR SCHOOLS.

	1st Year.	2d Year.	3d Year.	4th Year.	5th Year.	6th Year.	7th Year.	8th Year.	9th Year.
Reading.....	660	570	520	300	220	180	160	150	150
Arithmetic.....	150	210	240	250	280	280	280	280	180
Algebra.....	....	....	....	....	....	....	....	....	120
Grammar.....	....	....	....	....	....	120	130	150	170
Comp. and Lang.....	75	75	75	150	150	100	100	100	100
Geography.....	20	20	30	180	180	180	170	150	150
History.....	20	20	30	40	60	60	140	150	150
Spelling.....	60	90	90	100	100	100	100	100	90
Writing.....	60	60	60	60	60	60	60	60	60
Drawing.....	60	60	60	60	60	60	60	60	60
Music.....	60	60	60	60	60	60	60	60	60
Nature Study.....	30	30	30	60	60	30	30	30	30
Physiology.....	25	25	25	....	30	30	30	30	....
Sewing.....	....	....	....	60	60	60	....	....	....
*Manners, Morals.....	25	25	25	25	25	25	25	25	25
Physical Culture.....	30	30	30	30	30	30	30	30	30
†Recesses.....	200	200	200	100	100	100	100	100	100
‡Opening Exercises.....	25	25	25	25	25	25	25	25	25
Totals.....	1500	1500	1500	1500	1500	1500	1500	1500	1500

*Required by State Law; time fixed at five minutes each day by vote of the School Committee.

†See Sec. 22, Chap. III, of the Rules of the School Committee.

‡See Sec. 23, Chap. III, of the Rules. If for any reason a recess is shortened or omitted the time for the same should be given to physical exercises, and the hours for closing schools prescribed by the School Committee should not be changed.

Book-keeping may receive one-half the time assigned to penmanship in the ninth year.

Physics, optional, in the ninth year, may occupy 60 minutes per week, to be taken equally from physical culture and grammar.

The above table is intended as an approximate estimate of the relative importance of the different studies, and teachers are at liberty to vary the time for each study within such reasonable limits as circumstances may require.

FIRST YEAR.

FIRST HALF.

READING.—Teach by the sentence and word method, beginning with script letters on the blackboard, and later using the Monroe, Burt or Appleton Chart and the first lessons in the First Reader. As soon as a few words are learned use phonic analysis to secure distinct articulation and assist in the recognition of new words. Consult on the subject of phonetics Ward's "Manual of Instruction for the Rational Method in Reading," and the Connecticut school document entitled "Phonetics in Teaching Reading." Secure naturalness of expression by making sure that no sentence is spoken until the thought is fully comprehended. Consult Miss Spear's "Preparing to Read," De Garmo's "Language Lessons, Part I," and Miss Badlam's "Suggestive Lessons in Language and Reading."

WRITING.—Short sentences from blackboard copy.

LANGUAGE.—Object: (1) To secure the confidence of the children and make them feel at home in school; (2) to increase their vocabulary; and (3) to accustom them to express their thoughts in simple and correct forms of speech.

Lead the children to talk freely about things with which they are familiar, and to reproduce short stories told them by the teacher. Require complete statements, correct forms of speech, and distinct articulation, using great care, however, that corrections are not made in a way to repel confidence or lessen interest. The importance of making children enjoy the first weeks of school life cannot be overestimated. Memory gems, brief maxims, and short selections of poetry, learned and

recited in this and all succeeding grades. History and literature in the form of short stories told by the teacher and reproduced orally by the children should have some place from the first, care being taken to have such stories very simple as well as short. The very excellent courses of study prepared by Dr. Edmund, principal of the training school, on "Oral and Written Language," on "Reading and Literature," and on "History" contain many valuable suggestions and directions in the line of the work desired, for which space is lacking in this very brief outline. These courses can be had at the office of the superintendent of schools, and should be in the hands of every teacher of the primary and grammar schools.

ARITHMETIC.—Numbers from one to five, inclusive. Add, multiply, subtract, and divide, developing all processes by the aid of objects. Consult Wentworth and Reed's "First Steps in Number," Baldwin's "Industrial Arithmetic," and Speer's "Primary Arithmetic" in this and succeeding grades.

GEOGRAPHY.—Conversation lessons, preparatory to regular work in geography. Teach position, as above, below, on, under, front, back, etc., and right and left as relative terms. Lead children to observe the temperature as warm, hot, or cold, and the weather as sunny, cloudy, or rainy. Consult Frye's "Primary Geography," and Maltby's "Map Modelling in Geography and History" in this and all succeeding grades of the primary schools.

NATURE STUDY.—Lessons to recognize and name a few common plants, animals and minerals, and to note single qualities of each. Teach only from observation and experiment. The "Outline Course" prepared by the N. E. Conference of

Educational Workers will be supplied to each school, and may be used as a manual. Consult also Miss Newell's "Lessons in Botany." Cooke's "Nature Myths" and Lovejoy's "Nature in Verse" are recommended for reading in this and succeeding grades.

PHYSIOLOGY.—Oral lessons, teaching the names and uses of the external parts of the body, and the simplest rules of health. Consult Prince's "Courses and Methods," pages 173 and 195. The order of topics prepared by Dr. Dunton of the Boston Normal School, and printed on page 196 of the above mentioned book, may profitably be followed in this and all succeeding grades. Teach the effect of the use of alcoholic stimulants and narcotics as required by the laws of the State.

MANNERS AND MORALS.—As required by the Public Statutes of the Commonwealth and printed on page 30 of the Rules of the School Committee, in this and all succeeding grades. Mrs. Dewey's "How to Teach Manners," or Miss Wiggin's "Lessons on Manners," may serve as a manual.

MUSIC AND DRAWING.—Throughout the course as directed by the special teacher of each of these branches.

SECOND HALF.

READING.—Franklin First Reader and supplementary readers. Continue phonics with much drill on phonograms and their blending into words. See that every phrase is spoken as a whole. In this, as in all grades, the aim is to secure a full comprehension of the thought, natural expression, distinct articulation, correct pronunciation, and ready utterance.

If the last part of the First Reader proves too difficult for the first year leave a part to be finished the second year.

WRITING.—Sentences from the blackboard, chart, and slips prepared for the purpose. The teaching of spelling will be included in the same exercise. See Ward's manual, page 29. If all the letters of the alphabet have not been learned by the pupil by the end of the year, unconsciously, give a little special instruction to accomplish this object.

LANGUAGE.—Objects: to increase the pupils' stock of ideas and words, and to facilitate the expression of thought in correct forms of speech.

Conversational lessons as in the first half, carefully correcting all errors of expression. In this respect every lesson in this and all succeeding grades should be a language lesson. History and literature continued. Whenever possible make stories more interesting by showing pictures. Begin writing short sentences, and teach the capital at the beginning of the sentence, the capital I, and the period and interrogation mark.

ARITHMETIC.—Numbers, oral and written, to ten, inclusive. Use objects, but discard them gradually as facts are learned, and give much drill in applied and abstract work. Arabic and Roman notation to ten (and further, so as to enable pupil to tell page, lesson and paragraph in the reading book, at the option of the teacher.) Teach and use the signs $+$, $-$, \times , \div , $=$, and have their use begun by pupils. Teach, objectively, the fractions $\frac{1}{2}$, $\frac{1}{4}$; coins from one cent to ten cents; pint, quart, inch.

GEOGRAPHY.—Teach cardinal points with practical application to objects in the school room, the school yard, and streets

near the school house, and give easy oral lessons at appropriate times on natural objects and phenomena, as sun, clouds, rain, snow, etc.

NATURE STUDY.—Lessons as in the first half. Teach only the most general and obvious features, and assist pupils to find out all facts for themselves as far as possible. Whenever practicable, provide specimens for all the pupils. Encourage the children to make collections.

PHYSIOLOGY.—As in the first half. In connection with names and uses, teach the proper care of the hair, teeth, nails, etc. Do not try to teach too much; only general facts which are mainly within the range of the pupils' observation are wanted. Show importance of cleanliness, exercise, proper clothing, good food, pure air, etc., in this and succeeding grades.

SECOND YEAR.

FIRST HALF.

READING.—The first half of the Franklin Second Reader, and supplementary readers, with phonetic drill as before. The fault to be most carefully avoided in this and all succeeding grades of the primary course is haggling over words. To prevent this all new and difficult words should be pronounced and their meaning explained before oral reading is begun. Then, by questioning, make sure that the pupil fully understands what he has seen in print, and allow him to read, orally, only when he is ready to do so without halt or break. Make haste slowly, and give pupils much easy reading, rather than a little which is difficult.

WRITING.—Sentences and words as in the first year, and from dictation. Use capitals, the period and the question mark. As before the same exercise should teach spelling. Oral spelling may also be begun at the option of the teacher. Teach children to spell their own names and the names of places or objects in which they are interested.

LANGUAGE.—Teach the use of good English by illustration in readings and story telling, using for this purpose selections simple enough to be suited to the children and yet such as are in good literary form, and give practice in very simple reproductions, both oral and written. Have children copy sentences, bits of poetry, etc., and memorize appropriate selections. In written exercises teach the use of such marks of punctuation as their composition requires, and of such capital letters and abbreviations as are needed. The literature best adapted to this grade is that of fairy tales and folk lore stories, and the history is that of mythology and legend. Local history should receive a prominent place, and such stories as those of Columbus, the Pilgrims, Washington, etc., would be appropriate. Suit history to holidays as "The First Thanksgiving," to November, etc.

ARITHMETIC.—Numbers, oral and written, in separations and combinations, to twenty. Objects may be used if necessary, but ought not to be greatly needed. Continue drill in applied and abstract work. Simple operations in small fractions and in denominate numbers also continued. Teach pupils to read the signs $+$, $-$, etc., and to use them as well as know their meaning.

GEOGRAPHY.—Continue drill in cardinal directions, applying the terms north, south, etc., to all objects near enough to the

school-house to be within range of the child's observation or knowledge. Apply same to direction of wind. Continue study of objects within vision, as cloud, dew, fog, etc.

NATURE STUDY.—Work of the first year continued and extended. Of plants name parts, as stem, leaf, bud, etc. Name parts and note habits of animals, birds, insects, etc. Remember that no lesson is worth giving which does not thoroughly interest the pupil at the time, and tend to increase his regard for the natural objects which are all about him. Have pupils draw and describe, orally and in writing. Wood's "First Natural History Reader," and Wright's "Seaside and Wayside, No. 1," are provided as supplementary reading in this and succeeding grades.

PHYSIOLOGY.—The senses: the eye and sight; the ear and hearing. Teach only the most general features, any thorough study of the anatomy of the eye or ear being wholly out of place. Teach by observation and experiment as far as possible. Temperance teaching as before.

SECOND HALF.

READING.—Franklin Second Reader completed. Phonic drill continued and emphasized. If pupils cannot easily complete the Second Reader, omit the last part, and substitute easy reading from supplementary readers.

WRITING.—On paper, from blackboard copy, from dictation, and from print as found in the reading book.

SPELLING.—Words of the reading lesson copied by pupils either from the book or from the teacher's blackboard writing,

and afterwards written from dictation, or spelled orally, or both. Teach the spelling also of terms used in other studies, and of objects like articles of food or clothing with which children are familiar.

LANGUAGE.—As in the first half. Oral and written exercises. Continue to give attention to capitals and the most common marks of punctuation, and teach the simplest form of letter-writing. History and literature as in the first half.

ARITHMETIC.—Numbers, oral and written, to fifty, with drill as in the first half. Give much practice in oral examples, with abstract numbers involving several operations, for rapid work. Roman notation to fifty. Coins and dollar sign; pint, quart, gallon; pint, quart, peck, bushel; inch, foot, yard; hour, day, week, month, year; dozen. Fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$, $\frac{1}{6}$.

GEOGRAPHY.—Continue work of first half, and begin the work of recognizing and naming bodies of land and water which are within the range of the pupils' observation, as hill, valley, river, brook, etc. Field lessons are strongly recommended. With growing plants in the school-room, teach effects of too great heat or cold, lack of moisture, etc.

NATURE STUDY.—As in the first half. Continue collections. Experiment with seeds planted in pots in the school-room. Have children gather cocoons, and watch for the change into moths and butterflies. Make regard for animal life an integral part of all lessons on animals. Observe, draw, describe.

PHYSIOLOGY.—The senses continued; the nose and smell; the tongue and taste; touch. Show the use and value of all

the senses, and the ill effects of abuse, including under the latter topic the effects of alcohol and tobacco. Be careful not to lessen influence by over-statements.

THIRD YEAR.

FIRST HALF.

READING.—The first half of the Franklin Advanced Second Reader, and supplementary readers. The habit of reproducing that which has been read, usually orally, but sometimes in writing, which should have already been begun, becomes in this and succeeding grades a matter of the greatest importance, and every reading lesson should have in connection with it some work of this kind.

WRITING.—On paper with pen or pencil, and in the writing book with pen. Give special attention to correct pen holding. In all written work in language, nature study, etc., insist on order, neatness, and the very best penmanship of which the pupil is capable.

SPELLING.—Words and sentences copied from the reading book, and afterwards written from dictation. New words in the reading lessons spelled orally, and afterwards written in sentences. Be sure that no pupil is called upon to spell a word the meaning of which is not known. Insist upon correct spelling in all written work. Give much drill on familiar words which are often misspelled, but do not consider it necessary to teach the spelling of all the difficult and uncommon words which are found in the reading book.

LANGUAGE.—Oral and written exercises. Review, continue, and extend all work of previous grades. Teach different

forms of sentences, the use of is, are; was, were; did, done; saw, seen, etc.; the correct use in sentences of some synonyms, as big, large; like, love, etc.; and a few homonyms, as fore, four; write, right; no, know, etc.; the use of capitals with proper names, some abbreviations and such punctuation as is needed in the written work done by the pupils.

The work in history and literature may be extended somewhat, both in use and in subjects. A little written reproduction may be added to the oral, and stories for literary culture may include myths, fables and folk lore such as are given by Hawthorne in his "Wonder Book," or Scudder in his collection of folk lore tales. In myths, choose those of natural objects as "Ulysses and the Bag of Winds," etc. History may include more stories of noted men and events. The history of Lowell is worthy of much attention, especially the story of its founding. Note use of Indian names as Wamesit, Merrimack, Pawtucket, etc. Use pictures when possible.

ARITHMETIC.—Numbers, oral and written, Arabic and Roman notation, to one hundred. Drill as before on rapid, applied, and abstract work, and give much attention to adding numbers in columns, and to the multiplication table. Review and extend all previous work, especially that in fractions and denominate numbers. To fractions previously studied add twelfths.

GEOGRAPHY.—Teach as many land and water surfaces as can be brought within the range of observation (names, not definitions), and, by the aid of pictures, begin to develop some knowledge of objects beyond vision. Field lessons and sand modeling, if possible. Consult Frye's "Primary Geography," "Brooks and Brook Basius," and "Child in Nature."

NATURE STUDY.—Observation lessons on familiar plants, animals, and minerals continued, to include some knowledge of parts, habits, uses, qualities, etc., with comparisons noting resemblances and differences. In the study of minerals consult Crosby's "Common Minerals and Rocks" and Richards, "First Lessons in Minerals." Read in this year, "Wood's Second Natural History Reader" and "Seaside and Wayside, No. 2." Consult Ricks' "Natural History Lessons."

PHYSIOLOGY.—The bones, teeth, skin and muscles. Teach few names, and only the most general features, giving special attention to the laws of health. Temperance teaching continued. Throughout this year some exercises may well be written, and the interest may be increased by drawing some of the parts described.

SECOND HALF.

READING.—Franklin Advanced Second Reader completed, and supplementary readers. Continue phonics and enunciation exercises.

"The best way to teach children to read, after they are once started, is to put into their hands a good story book."—*Swett*.

WRITING.—Copy book No. 2, with pen, and paper with pen or pencil, as before.

SPELLING.—As in the first half.

LANGUAGE.—Results to be accomplished: At the end of this year pupils should be able to reproduce the thoughts of others, whether read silently by themselves or told them by the teacher, and to express their own thoughts on any subject

clearly within the limits of their own knowledge, with considerable facility and in correct and appropriate forms of speech. They should have some knowledge of the simplest form of letter-writing, and should know the usual marks of punctuation, the common abbreviations, and the proper use of capital letters.

The work to be done is best indicated by the above statement. Consult Tarbell's "Lessons in Language," of which Part I will be the work for pupils in the first half of the fourth year.

ARITHMETIC.—Numbers to one hundred and forty-four. Arabic and Roman notation to one thousand. Review and extend the work of all previous grades. To be ready for promotion to a grammar school, children should be able to add columns of figures to a total of 100 rapidly and accurately; to know the multiplication table to twelve times twelve; to use all the common tables of denominate numbers in simple reductions; to find fractional parts of all numbers less than 144 which are multiples of the denominators of fractions to and including twelfths; and to add, subtract, multiply, and divide small fractions, like $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$.

GEOGRAPHY.—Continue work of first half and review and extend work of all previous grades. Teach by observation as far as possible, and then, by the use of pictures, as many bodies of land and water as is possible. Observe, draw, model, and describe.

NATURE STUDY.—Lessons as in the first half.

PHYSIOLOGY.—Circulation, respiration and digestion. As before, avoid teaching too much, and make the instruction as practical as possible by relating each fact learned to some simple and easily followed law of health.

GRAMMAR SCHOOLS.

FOURTH YEAR.

READING.—Franklin Third Reader and supplementary reading of the same grade. For reading to pupils it is hoped that teachers will obtain from the city library and elsewhere many books from which to get selections not to be found in regular text books. Correlate history and geography with reading by the use of stories of heroes either real or mythological, and by accounts of strange countries and unique productions.

SPELLING.—Words in common use, orally and in writing. By definition, or use in sentences, make sure that pupils understand the meaning of all words given for a lesson. Make every written exercise a lesson in spelling. Select words for practice from all text books used, and for supplementary drill use Worcester's New Pronouncing Speller: First half to page 29; second half to page 47.

ARITHMETIC.—Numbers to 1000. Daily oral drill in numbers to 100, as in the primary schools. Written work, with numbers expressed by not more than three figures, in addition, subtraction, multiplication and division, no multiplier or divisor to be larger than 9. Use terms, sum, product, multiplier, etc., but do not require definitions. Give problems in dollars and cents, using the dollar sign and decimal point. Continue the drill of the primary school in easy reductions of denominate numbers. Teach thoroughly the reduction, addition, subtraction, multiplication and division of the fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{9}$, $\frac{1}{12}$, illustrating all processes by objects, but using the written expression from the first. Second half, continue and extend all work of the first half. Notation and numeration to

1,000,000. Multiplication with multipliers large enough to be expressed by two or three figures, and long division, no divisor larger than 25. Decimals to thousandths in addition and subtraction, and in multiplicands and dividends in multiplication and division.

LANGUAGE.—Teach the sentence as the unit of thought, its four kinds, and its division into subject and predicate. Have much oral work and give such written exercises as shall review and extend knowledge of the proper use of capitals, punctuation marks, and abbreviations. Tarbell's and De Garmo's first books on language should be consulted for suggestions much fuller than can be given here. Continue the story telling and readings of the previous grades, and extend the amount and range of selections for memorizing. Continue letter writing both original and from dictation, using, however, in this grade, only the simplest forms. Second half, continue work of the first half, and for new work teach the use of the plurals and possessives of nouns.

GEOGRAPHY.—The earth as a whole, with land and water forms; the air, winds, dew, rain, snow, etc. Teach by observation as far as possible, relating that which is beyond vision to that which has been observed as far as can be done, and using pictures to still further assist the imagination. Second half, the use of globes and maps and a brief general study of the hemispheres and their grand divisions, North America, the United States as a whole, and the New England and Middle States more in detail.

HISTORY.—As many stories should be read by the pupil, or told or read to them by the teacher, as time will permit, but the number of facts to be required for reproduction should be

very few, probably not more than could be written on a page of foolscap, or told by a class in the time of a single recitation. These few, however, should be learned with the utmost exactness and thoroughness; they should be planned to form the basis of all future study of the history of the United States from Columbus to McKinley; should include a few dates like 1492, 1776, etc.,—a half dozen will do very well, but these few should be so learned as to be recalled as automatically as the child would recall his own name. In the recitation of facts intended to be mastered no mistakes should be tolerated; nine-tenths of the teaching, however, should not have the memorizing of facts, names and dates as any part of its object, but should aim to quicken interest, broaden vision, stimulate patriotism and develop character through appreciation of courage, loyalty and virtue as exemplified in the heroes of history. Use pictures, relics, etc., to increase interest as far as possible, and remember that whatever else is accomplished the lesson is a failure which does not leave the class with a desire for further study.

NATURE STUDY.—Continued study of plant life, emphasizing the changes from flower to fruit and seed; continued study of animals for recognition, habits, and adaptation of parts; second half, more detailed study of the plant and its parts, with conditions of germination and growth, such as need of air, light, warmth, moisture and proper soil; pebbles, sand and clay with reference to life history of rocks.

Writing, Drawing and Music as directed by the supervisors of these branches in this and succeeding grades. Sewing under direction of the special teacher in this and the next two grades.

FIFTH YEAR.

READING.—Franklin Fourth Reader, and supplementary books. For suggestions see Miss Edmund's course for this year.

SPELLING.—As in the fourth year, with words for supplementary drill: First half to page 69 in the authorized text book; second half to page 93.

ARITHMETIC.—Continue all the work of the previous year. Whatever else is omitted see that oral drill and rapid written work with small numbers are given prominent places on the programme. In written work give many examples and problems with small numbers, rather than a few with large numbers. Long division with divisors of not more than three figures. In addition to constant practice with fractions already learned, teach $\frac{1}{5}$, $\frac{1}{10}$, and continue practice in the use of decimals and denominate numbers. In the use of the authorized text book omit all the examples involving long and tedious operations with large numbers; second half, continue work of the first half. Teach the reduction, addition, subtraction, multiplication and division of fractions to and including twenty-fourths. Teach least common multiple when needed as a means of finding the least common denominator of fractions, and factoring and cancellation when needed for practical use. Extend work of previous years in denominate numbers to include all simple reductions.

LANGUAGE.—Dictation, reproduction, description, narration work and letter writing continued. For new work teach the use adjectives, with their comparisons, and pronouns. Second half, continue work of first half with careful attention to the use of punctuation marks, capitals, etc., and complete

the study of the use of the parts of speech not already learned as outlined in Tarbell's Lessons from page 156 to the end of the book.

GEOGRAPHY.—Complete the study of the groups of states which compose the United States, and of South America. Second half, teach of Europe, Asia, Africa and Oceania, making the work simple, general and elementary, as would be suggested by the authorized text books.

HISTORY.—First ascertain exactly what facts were taught in the fourth year, and review the same so thoroughly and constantly that no one of them shall escape. Second, add about as many new facts, dates, etc., as were mastered in the last year, and teach them with the same thoroughness and intensity as was then demanded. Cover the whole period of the history of civilized man in America, selecting the new matter of this year so as to fill out and supplement the exceedingly brief outline of the previous year, and relate our history to that of the world's whole past as far as such relation is natural and helpful. In teaching a few, a very few, indispensable things be satisfied with nothing less than perfection, and for the rest and by far the most of the time have pupils read and enjoy the stories which are the life of history without attempting to burden them with the recollection of all they read. Correlate with geography, make and use maps, draw, use pictures, make collections, etc., etc.

NATURE STUDY.—Study of trees, for recognition by differences in size, form, leaves, bark, etc.; study of one insect, as grass-hopper, butterfly or moth, as type; gather cocoons and note metamorphosis. Second half, study of plants and their

growth continued, emphasizing roots and stems; of rock-forming minerals, as quartz, mica, feldspar, hornblende, etc. Note use as building stones.

PHYSIOLOGY.—Book No. 1 of the Union Series as a reader, with such comment and instruction in this and succeeding grades as shall comply with the following law of this State: “Physiology and hygiene, which shall include special instruction as to the effects of alcoholic drinks, stimulants and narcotics on the human system shall be taught as a regular branch of study to all pupils in schools supported by public money.”

SIXTH YEAR.

READING.—Franklin Intermediate and supplementary books.

SPELLING.—As before, correlate spelling with every subject taught. Make every written exercise a lesson in spelling, and for supplementary drill use the authorized text book; first half, to page 111; second half, to page 125.

ARITHMETIC.—Continue oral drill and rapid written work with small numbers. Review and extend work in fractions but do not attempt to master the too difficult problems of the text book. Teach decimals more fully than before, and give many problems involving the use of United States money and the reduction of denominate numbers. Second half, continue all work of first half. Practice in compound numbers should include all common reductions, but should omit the addition, subtraction (with the exception of the subtraction of dates), multiplication and division of compound numbers as such, longitude and time, metric equivalents, etc.

LANGUAGE AND GRAMMAR.—First half, (*a*) Language:—A careful review of the work of previous years, as suggested by the first 14 pages of the authorized text book. Suggest and, as far as possible, provide abundance of good selections of both poetry and prose for pupils' reading in this and all higher grades. Draw liberally on the Public Library. See that at least one brief selection or memory gem is memorized each month.

(*b*) Grammar.—(1) The analytic study of the sentence, subject and predicate, essential and complete; (2) the classification of words *according to their use in sentences*, to include nouns and pronouns. (Southworth and Goddard, pp. 77-98.)

Second half, (*a*) Language:—Review and extend the knowledge and practice of letter writing, including the heading, address, salutation, body, complimentary ending, signature and superscription, as suggested in the text book, pages 14 to 36.

(*b*) Grammar.—The classification of words continued to include all the parts of speech not already studied (pp. 98-126.)

GEOGRAPHY.—Mathematical, physical and political. Geography of the earth as a whole, with a general study of the hemispheres, as outlined in the first 26 pages of Butler's Complete Geography. Second half, North America, the United States as a whole, and the New England and Middle States in detail.

HISTORY.—Treat the work of the fourth and fifth years in history exactly as the teacher of fifth year was instructed to treat that of the year preceding her own, and make a few additions in accordance with the plan and in the spirit heretofore suggested.

NATURE STUDY.—Study of trees continued. In spring emphasize clusters of flowers, maple, elm, horse chestnut, etc., and in fall tree fruits and the dispersion of seeds. Study of birds, grouping according to habits; e. g. aerial—perchers; terrestrial—scratchers; aquatic—swimmers, and the adaptation of parts to these habits.

PHYSIOLOGY.—Book No. 2 of the Union Series as a reading book, with comment and instruction as before.

SEVENTH YEAR.

READING.—Franklin Intermediate and supplementary readers.

SPELLING.—Work of the sixth year continued. For supplementary drill use the text book: First half to page 135; second half to page 145.

ARITHMETIC.—Review constantly the work of all preceding years, but especially the work in fractions and denominate numbers. For advance work take up percentage, with applications to profit and loss, insurance, brokerage, taxes, etc. Second half, to work of first half add interest, simple and compound, with applications to promissory notes and discounts at banks. Note that “Days of Grace” are no longer required on commercial paper other than sight drafts.

LANGUAGE AND GRAMMAR.—First half, (*a*) Language:—To the letter writing, dictation and reproduction exercises of the previous year add narrative writing, with careful attention to capitals, punctuation and paragraphing as before. No day should be allowed to pass without some form of composition exercises as indicated above.

(b) Grammar.—Sentence building; the base of a sentence, with modifiers; sentence analysis (pp. 126–156.)

Second half, (a) Language.—The work of the first half continued and extended. It is of far more importance to any pupil that he should be able to write a properly arranged and well-worded letter or express himself tersely and clearly in orderly narration than that he should know much of technical grammar, and excellence in the latter should never be sought at the expense of the former.

(b) Grammar.—Structure of sentences continued, reviewing and extending work of past years. Begin the classification of the parts of speech according to *kind*, *form* and *use*; nouns (pp. 156–183.)

GEOGRAPHY.—Atlantic, Gulf and Central States; second half, Rocky Mountain and Pacific States and Territories, British America, Mexico, the Central American Republic and other States, and West Indies.

HISTORY.—Discovery, exploration and conquest of America to date of first permanent English settlement in greater detail than before, but with constant use of the outline already learned, using the order of the authorized text books. Relate the history of this country as fully as possible to the European, and especially to the English history which preceded it. Second half, the settlement of North America to the beginning of the French and Indian war.

NATURE STUDY.—Grains and grasses in the fall; rose family in spring. For animal study specialize on some typical family, as e. g. for marine animals, the oyster or clam, the lobster or crab. Compare with vertebrates (fish). For work in

minerals, the study of some common metals and their ores, as iron, copper, etc.

PHYSIOLOGY.—First half, food and digestion; second half, the blood, blood vessels and circulation. General facts relating to laws of health are to be emphasized rather than minor details of structure. Teach origin and effects of the use of alcohol as required by law.

EIGHTH YEAR.

READING.—New Fifth Reader and supplementary books.

SPELLING.—Relate spelling to all other subjects taught as in previous years and use the authorized text book for additional drill. First half to page 155; second half to page 163.

ARITHMETIC.—Review the work of all previous years, with further applications of the principles of percentage and interest to stocks and bonds, exchange, etc., and add partnership, ratio and proportion. Of subjects treated in the authorized text book omit equation of payments, problems in exchange involving interest bearing drafts, and the more complicated problems in partnership. Second half, involution, evolution, to include second and third roots, and mensuration of plane surfaces to and including circles.

LANGUAGE AND GRAMMAR.—First half, (a) Language—Letter writing, reproduction exercises and narrative writing continued, with careful attention to capitals, punctuation and paragraphing as before. Relate language to all subjects studied by giving the preference in the choice of topics to those which are suggested by the study of history, geography, etc.

(*b*) Grammar.—(1) Analysis and synthesis of sentences continued; (2.) Classification of words as to kinds, forms and uses continued, to include pronouns and adjectives. (pp. 183-219.)

Second half, (*a*) Language:—to exercises previously suggested add descriptive writing with subjects chosen as in the first half. Choice extracts of prose and poetry should be studied for the sentiment conveyed as well as for beauty of style and elegance of diction. Do not forget the direction given at the beginning of the course that at least one selection each month should be carefully memorized by every pupil.

(*b*) Grammar:—To a constant review of the work of all past years add the study of verbs as to kinds, forms, uses, etc. (pp. 219-263.)

GEOGRAPHY.—South America and Europe. Second half, Asia, Africa, Oceania, with a general study of the principal commercial routes of the world, and of the chief exports of leading commercial ports.

HISTORY.—The conquest of Canada, and the development of the English colonies in America into the United States to the time of the Treaty of Paris in 1783. Second half, the establishment, growth and history of the Union under the Constitution to the administration of Andrew Jackson, 1829.

PHYSIOLOGY.—The study of the human body as outlined in the authorized text book, Union Series, Book 3, to include the respiratory system, the bones, joints and muscles. Second half, study of the subject as outlined in the text book completed.

NATURE STUDY.—Birds, from observation, for recognition, knowledge of the time of arrival and departure of those which

are migratory, habits, food, nesting, etc. Pupils ought at the end of the year to know from personal observation a dozen kinds. (Several pupils saw and studied 80 or more varieties in Lowell and its immediate vicinity last year.)

NINTH YEAR.

READING.—New Fifth Reader, Masterpieces of American Literature, and other supplementary books. Read and study as literature Irving's *Rip Van Winkle* and Longfellow's *Evangeline* in the first half year, and Whittier's *Snow Bound*, Hawthorne's *Great Stone Face* and Lowell's *Vision of Sir Launfal* in the second.

SPELLING.—As in previous years, with supplementary drill on words found in the last part of Worcester's *Speller* in the first half, and in the whole book in the last half.

ARITHMETIC.—General review of the whole subject, emphasizing fundamental operations in fractional and denominate numbers. Show the relation of ratio, as studied, in the eighth year, to fractions, denominate numbers, etc., and treat percentage as a form of fractions. Some of the problems of the text book which were omitted in the study of these topics in previous years may now be profitably taken up. Second half, complete the subject to the extent of the authorized text book to page 263, with the omissions heretofore suggested, emphasizing mensuration and other practical applications. (This work is slightly different from that of previous years, and is not intended to be taken before September, 1899.)

ALGEBRA.—The expression of quantities by algebraic symbols; the equation, including transposition of terms,

solution, verification, etc.; many problems to be solved by the use of simple equations, and the addition and subtraction of integral algebraic expressions, with theory of negative quantities, the use of parenthesis, factoring, etc. Second half, multiplication and division of integral algebraic expressions to page 71 in Wentworth's "First Steps in Algebra," with review of the work of the first half. The time allowed for mathematics, one hour per week through the year, is to be divided between arithmetic and algebra, giving to arithmetic the larger share, as is made necessary by the greater amount of work to be done. The relation of the two studies, whether they shall be taken together, or alternated by days, weeks, or months, is left optional with the teacher.

LANGUAGE AND GRAMMAR.—First half, (a) Language:—Continue every form of exercise hitherto suggested, with special attention to paragraphing and to discrimination in the choice of words, synonyms, variety of expression, etc. In letter writing add to familiar and business letters, formal notes of invitation and answers to the same.

(b) Grammar:—No division of work into first half and second half is attempted. In the whole year review and extend the work of previous years.

GEOGRAPHY.—Give special attention to local geography and that of the State, and review briefly the mathematical, physical and political geography of the earth as a whole, and of the United States and other political divisions of North America. Omit geographical study in the last half of the year.

HISTORY.—First half, complete the history of the United States to date. Second half, review the whole subject.

BOOK-KEEPING.—One-half the time allotted to penmanship may be devoted to book-keeping.

NATURE STUDY.—Trees from observation. Pupils ought to be able at the end of the year to locate and describe fifty varieties which they have seen in the city. Collections of woods are recommended.

PHYSICS.—(Optional) As outlined in the authorized text book.

HIGH SCHOOL.

FIRST YEAR.

<i>Classical Course.</i>	<i>College Course.</i>	<i>English Course.</i>
First Half Year.	First Half Year.	First Half Year.
Latin.	Latin.	Outlines of History.
Algebra.	Algebra.	Algebra.
English Lessons.	Greek History.	English Lessons.
	Eng. Half Course.	Manual Training.
Second Half Year.	Second Half Year.	Second Half Year.
Latin.	Latin.	History and Eng.
Algebra.	Algebra.	Algebra.
Physical Geog.	Roman History.	Physical Geog.
Eng. Half Course.	Eng. Half Course.	Manual Training.

SECOND YEAR.

First Half Year.	First Half Year.	First Half Year.
Cæsar.	Cæsar.	French I.
Geometry.	Greek I.	Geometry.

Physics.	Geometry.	Physics.
Eng. Half Course.	Eng. Half Course.	English.
		Manual Training.

Second Half Year.	Second Half Year.	Second Half Year.
Cæsar.	Cæsar.	French I.
Geometry.	Greek I.	History.
Physics.	Geometry.	Geometry.
Eng. Half Course.	Eng. Half Course.	Physics.
		English.
		Manual Training.

THIRD YEAR.

First Half Year.	First Half Year.	First Half Year.
Cicero.	Cicero.	French II.
French I.	Greek II.	Rhetoric.
Chemistry.	Coll. Physics.	Chemistry.
Arithmetic.	Coll. Mathematics.	Arithmetic.
Rhetoric.	Coll. English I.	Astronomy.
	Coll. French I.	Manual Training.

Second Half Year.	Second Half Year.	Second Half Year.
Cicero.	Cicero.	French II.
French I.	Greek II.	Rhetoric.
Chemistry.	Coll. Physics.	Chemistry.
Rhetoric.	Coll. Mathematics.	Physiology.
Physiology.	Coll. English I.	Const. History.
Const. History.	Coll. French I.	Manual Training.

FOURTH YEAR.

First Half Year.	First Half Year.	First Half Year.
Virgil.	Virgil.	French III.

French II.	Greek III.	German.
German.	Coll. French II.	Literature.
Literature.	Coll. English II.	Astronomy.
Astronomy.		

Second Half Year.	Second Half Year.	Second Half Year.
Virgil.	Virgil.	French III.
French II.	Greek III.	German.
German.	Coll. French II.	Literature.
Literature.	Coll. English II.	Botany.
Geology.	Solid Geometry.	Geology.
Botany.		Solid Geometry.
Solid Geometry.		

The following course is recommended for those who are fitting for Harvard College or Radcliffe:—

FIVE YEARS' COLLEGE COURSE.

FIRST YEAR.

First Half.	Second Half.
Latin.	Latin.
Algebra.	Algebra.
Greek History.	Roman History.

SECOND YEAR.

First Half.	Second Half.
Cæsar.	Cæsar.
Greek I.	Greek I.

Geometry.

Geometry.

English Half Course.

English Half Course.

THIRD YEAR.

First Half.

College English I.

Physics.

Cicero.

Greek II.

Second Half.

College English I.

Physics.

Cicero.

Greek II.

FOURTH YEAR.

First Half.

College Mathematics.

Greek and Latin Prose, and
History.College French I, Half
Course.

College English II.

Second Half.

College Mathematics.

Greek and Latin Prose, and
History.College French I, Half
Course.

College English II.

FIFTH YEAR.

First Half.

Virgil.

College French.

College Physics.

Homer.

*German.

Second Half.

Virgil.

College French.

College Physics.

Homer.

*German.

*Solid Geometry.

*Optional.

MANUAL TRAINING COURSE.

FIRST YEAR.

First Half Year.

Latin.

Algebra.

English (Two hours.)

History.

Man. Training { Carpentry
and
Drawing.

Second Half Year.

Latin.

Algebra.

History and English.

Physical Geography.

Man. Training { Carpentry
and
Drawing.

SECOND YEAR.

First Half Year.

Latin.

Geometry.

Physics.

English (Two hours.)

Man. Training { Wood-turn-
ing and
Drawing.

Second Half Year.

Latin.

Geometry.

Physics.

English (Two hours.)

Man. Training { Pattern-
making and
Drawing.

THIRD YEAR.

First Half Year.

French.

College Mathematics.

English.

Chemistry.

Man. Training { Forging
and
Drawing.

Second Half Year.

French.

College Mathematics.

English.

Chemistry.

Man. Training { Moulding
and
Drawing.

FOURTH YEAR.

First Half Year.

French.

German.

English.

College Physics.

Man. Training { Machine-
work and
Drawing.

Second Half Year

French.

German.

English.

College Physics.

Solid Geometry.

Man Training { Machine-
work and
Drawing.

An outline of the courses of study is shown to each pupil who seeks admission to the High School in September, together with the following notes and explanations. These are reprinted here that parents and prospective pupils may have time to study them in advance:—

“The following outline of courses of study is to assist those pupils who may be in doubt in regard to a proper choice of subjects. Pupils are earnestly advised to consult their parents before making their decision, as no change can be made during the term. They will have the advice of teachers also, to guide them.

The school year is divided into two half-years. Pupils are required to take three studies each half-year unless excused on account of illness. In all courses the pupil must take English, either as a full course or half course, through the entire school attendance. In addition to this work pupils are required to take general exercises, as Elocution, Calisthenics, Military Drill, and Music. Each pupil must complete six first year, six second year and six third year studies, making a total of eighteen for a three-years' diploma. For a four-years' diploma he must complete six fourth year studies additional, making a total of twenty-four.

Pupils who have completed sixteen, ten, or four studies will be classed respectively as fourth year, third year or second year students. Those who have completed a less number for each year will be classed respectively as third year, second year or first year students.

The English Course covers a period of three years; a fourth year may be added. It is intended for those pupils who desire a special preparation for business. First year: Algebra, History, English, Phy-

sical Geography, and Book-keeping. Second year: French, English, Geometry and Physics. Third year: French, English, Chemistry, Arithmetic or Astronomy, Physiology or Constitutional History. In this course Manual Training is elective. Fourth year: French, German, English, Latin, Geology, Astronomy, Solid Geometry.

The Manual Training Course includes the academic studies required in fitting for such schools as the Lawrence Scientific School and the Massachusetts Institute of Technology.

The Classical Course covers a period of four years, and includes the general studies of a High School. It furnishes preparation for admission to the Normal School; and with the Mathematics of the College Course, furnishes preparation for the Institute of Technology, the Lawrence Scientific School, and other institutions of similar character. First year: Latin, English, Algebra and Physical Geography. Second year: Latin, English, Geometry and Physics. Third year: Latin, French, Chemistry or Arithmetic, English, Physiology or Constitutional History. Fourth year: Latin, French or German, English, Botany, Geology or Astronomy.

The College Course furnishes preparation for admission to any American College, and may be completed in four or five years, at the option of parents or guardians. First year: Latin, Algebra, Greek or Roman History, English. Second year: Latin, Greek, English, Geometry. Third year: Latin, Greek, Physics and Mathematics. Fourth year: Latin, Greek, French, English."

NORMAL SCHOOL COURSE.

The following are the requirements for admission to a normal school as printed in a circular issued by the State Board of Education. By the omission of astronomy and geology the classical course becomes the one which meets the conditions imposed:—

"Candidates for admission to any one of the normal schools must have attained the age of seventeen years complete, if young men, and sixteen years, if young women; and must be free from any disease or infirmity which would unfit them for the office of teacher. They must present certificates of good moral standing, give evidence of good intellectual capacity (*records of their scholarship standing in the high schools are*

desired) and be graduates of high schools whose courses of study have been approved by the Board of Education; or they must have received, to the satisfaction of the principal and the Board of Visitors of the school, the equivalent of a good high school education. The examinations for admission shall cover such elementary and high school subjects as may be determined by the Board.

For 1896 and thereafter, until further notice, the examinations will embrace papers on the following groups, a single paper with a maximum time allowance of two hours to cover each of groups 1, 2 and 4, and a single paper with a maximum time allowance of one hour to cover each of groups 3 and 5 (*five papers with a maximum time allowance of eight hours*):—

1. *Languages*.—(a) English, with its grammar and literature, and (b) one of the three languages,—Latin, French and German. The candidate is earnestly advised to study *Latin* and either *French* or *German*.

2. *Mathematics*.—(a) Arithmetic, (b) the elements of algebra, and (c) the elements of plane geometry.

3. *History and Geography*.—The history and civil government of Massachusetts and the United States, with related geography and so much of English history as is directly contributory to a knowledge of United States history.

4. *Sciences*.—(a) Physical geography, (b) physiology and hygiene, (c) physics, (d) botany, and (e) chemistry.

5. *Drawing and Music*.—(a) Elementary, mechanical and free-hand drawing, with any one of the topics, form, color and arrangement, and (b) musical notation."

Roll of Teachers.

Giving Name, Grade, Residence, Date of Election, and Salary.

HIGH SCHOOL.

Kirk and Anne Streets.

CYRUS W. IRISH, Head Master, 19 Mt. Vernon St.	1885	\$2,500
FRANK B. SHERBURNE, Sub Master, 58 Dover St., <i>Language</i>	1883	2,200
MARY A. WEBSTER, 45 Varney St., <i>Language and Mathematics</i>	1859	900
ELIZABETH MCDANIELS, 408 E. Merrimack St., <i>Literature</i>	1868	800
CHARLOTTE E. DRAPER, 47 Belmont Ave., <i>Language and Science</i>	1870	800
ALICE J. CHASE, 263 Fairmount St., <i>Science and Language</i>	1877	800
SUSIE L. D. WATSON, 31 1-2 Dutton St., <i>Language and Mathematics</i>	1885	800
ADELAIDE BAKER, 136 Myrtle St., <i>Language</i>	1885	800
JENNIE L. ALLEN, 947 Middlesex St., <i>Science</i>	1885	800
EMMA L. BRADLEY 485 Westford St., <i>Language</i>	1890	800
GERTRUDE A. RODLIFF, Chelmsford Centre, Mass., <i>English</i>	1890	800
MARIETTA CASSIDY, 4 Fifth Ave., <i>Language</i>	1890	800

ROLL OF TEACHERS.

85

GEORGIANNA F. VINTON, 52 Fourth St., <i>English</i> . . .	1872	800
GRACE M. GOODHUE, 120 School St., <i>History and Mathematics</i>	1893	800
BESSIE E. HUNTOON, 182 Mt. Vernon St., <i>Language</i> . . .	1894	800
GRACE WARD, 279 Chelmsford St., <i>Mathematics</i> . . .	1895	800
MARY E. O'CONNOR, 91 Tremont St., <i>English</i> . . .	1896	700
CARL D. BURTT, 75 Fort Hill Ave., <i>History</i> . . .	1895	1,000
FRED R. WOODWARD, 11 Simpson St., <i>Mathematics</i> . .	1895	1,000
PERCIVAL G. BARNARD, 68 Howard St., <i>English and Latin</i>	1897	800
HELEN M. LAMBERT, 283 Pawtucket St., <i>Science</i> . . .	1897	700
C. R. HARRIS, 54 Kirk St., <i>Manual Training</i> . . .	1897	1,000
JOHN A. DONOVAN, 256 Branch St., <i>Mathematics</i> . . .	1898	800
THOS. F. FISHER, 1045 Middlesex St., <i>Manual Training</i> .	1898	800
EMMA M. HUNTLEY, 249 Branch St., <i>Physical Culture and Elocution</i>	1894	500

BARTLETT GRAMMAR SCHOOL.

Clark Street, Corner Wannalancit Street.

CYRUS A. DURGIN, Master, 117 Bowers St.	1891	\$1,900
BELLE A. PRESCOTT, 9th year, 68 Mt. Washington St. .	1878	600
CHARLOTTE M. MURKLAND, 9th year, 117 Bowers St. .	1898	600
BELLE F. BATCHELDER, 8th year, 66 Arlington St. .	1883	600
BLANCHE A. CHENEY, 8th year, 24 Marginal St. . . .	1896	600
AMY L. TUCKE, 7th year, 111 Butterfield St.	1880	600
MARIA W. ROBERTS, 7th, 167 School St.	1875	600
MARY E. WALSH, 6th year, 9 Corner St.	1897	500
CARRIE E. ERSKINE, 6th year, 138 Mt. Vernon St. .	1893	600
MARY I. HOWE, 5th year, 84 Methuen St.	1873	600
FRANCES M. TALBOT, 5th year, 167 School St. . . .	1882	600

BARTLETT PRIMARY SCHOOL.

FANNIE M. SPOONER, 2nd year, 75 Bowers St. . . .	1898	\$600
GRACE B. ALVORD, 1st year, 113 Varnum Ave. . . .	1896	450

MORRILL SCHOOL.

Common and Adams Streets.

ELLEN F. COUGHLIN, Principal, 2nd year, 203 Cross St.	1853	\$650
NELLIE M. BROWN, 3rd year, 426 Fletcher St.	1865	600
ANNIE M. COURTNEY, 1st year, 24 Lagrange St.	1887	600
CHARLOTTE E. BROWN, 1st year, 426 Fletcher St.	1870	600

CROSS STREET SCHOOL.

Cross Street, between Fletcher and Mt. Vernon Streets.

SARAH E. SCALES, Principal, 3rd year, 28 Ralph St.	1866	\$650
ELLEN M. WHITE, 2nd year, 35 Dover St.	1863	600
A. GERTRUDE STILES, 1st and 2nd years, 72 Varney St.	1895	600
KATHERINE KELLY, 1st year, 69 Arlington St.	1893	600

BUTLER GRAMMAR SCHOOL.

Gorham Street.

CORNELIUS F. CALLAHAN, Master, 152 Fenwick St.	1884	\$2,000
NELLIE F. MURPHY, 9th year, 85 Sherman St.	1878	600
MARGARET T. MCCARTHY, 9th year, 647 Market St.	1890	600
MARY L. DONLAN, 8th year, 455 High St.	1890	600
ANASTASIA C. CORBETT, 8th year, 32 Highland St.	1887	600
MARY E. LANE, 7th year, Billerica	1894	600
DELIA T. BRADY, 7th year, 183 Chapel St.	1883	600
KATE E. KELLEY, 6th year, 129 Moore St.	1883	600
AGNES M. FOLEY, 6th year, 37 Newhall St.	1887	600
MARY L. MCSORLEY, 5th year, 30 Ash St.	1879	600
JENNIE S. NOBLE, 5th year, 21 Carter St.	1894	600
KATHERINE M. USHER, 4th and 5th years, 465 Parker St.	1895	600
GRACE G. MARREN, 6th year, 56 Butterfield St.	1896	600
SADIE E. TULLY, 4th year, 105 Westford St.	1897	500
HELEN E. GOOKIN, 4th year, Wamesit	1897	500
THERESE F. DONOGHUE, 6th and 7th years, 22 Royal St.	1897	500
ALICE C. O'BRIEN, 5th and 6th years, 24 Ames St.	1897	500

LYON STREET SCHOOL.

Corner Lyon and Central Streets.

ALICE T. LEE, Principal, 3rd year, 12 South Walker St.	1878	\$650
ANNABEL COSTELLO, 2nd year, 293 Nesmith St.	1888	600
MARY J. MCCARRY, 1st and 2nd years, 58 Elm St.	1881	600
NELLIE A. HUNT, 1st year, 68 Elm St.	1884	600

CARTER STREET SCHOOL.

Carter Street.

ISABELLA T. VINALL, Principal, 3rd year, 11 Simpson Place	1873	\$650
MARGARET J. CONNORS, 2nd year, 13 Pollard St.	1894	600
KATHERINE F. BRADY, 2nd year, 173 Chapel St.	1897	500
MARY V. JOHNSON, 1st year, 101-1 Prince St.	1897	500
GERTRUDE C. RING, 1st year, 80 Fifth St.	1898	450

AGAWAM STREET SCHOOL.

Agawam and Barrington Streets.

MARY A. FAY, Principal, 3rd year, 115 Stackpole St.	1889	\$650
SUSAN G. NEILON, 2nd year, 135 Andrews St.	1895	600
ROSE DONNELLY, 1st year, 15 Hudson St.	1896	600

LONDON STREET SCHOOL.

Corner of London and West Streets.

LIZZIE R. MAGUIRE, Principal, 2nd and 3rd years, 112 Pleasant St.	1884	\$650
ALICE A. MASTERSON, 1st and 2nd years, 100 Bourne St.	1892	600
MINNIE F. HILL, 1st and 2nd years, 203 Thorndike St.	1887	600

WEED STREET SCHOOL.

Corner of Weed and Gorham Streets.

MARY B. MCGOVERN, Principal, 3rd year, 31 Pearl St.	1886	\$650
LILLA M. MCEVOY, 2nd year, 181 Moore St.	1893	600
MARY J. CARMICHAEL, 1st year, 27 Ellsworth St.	1833	600

LOWELL TRAINING SCHOOL.

Telephone 531-3.

Charles and Lawrence Streets.

GERTRUDE EDMUND, Principal, 74 Huntington St.	1895	\$2,000
MABEL W. EWINGS, 127 Stackpole St.	1891	500
ADDIE B. MERRILL, 981 Bridge St.	1892	900
HELEN M. SHEAN, 11 Fort Hill Ave.	1891	800

CENTRAL STREET SCHOOL.

Central Street, opposite Hudson Street.

ELIZA COWLEY, Principal, 3rd year, 420 Lawrence St.	1857	\$650
KATE J. LAWLER, 1st year, 260 High St.	1885	600
ELIZABETH G. LAWLER, 2nd year, 260 High St.	1897	500
HELEN A. DRURY, 1st year, 44 Walnut St.	1897	500

AMES STREET SCHOOL.

Corner Lawrence and Ames Streets.

AMANDA M. HADLEY, Principal, 1st year, 89 Washington St.	1870	\$650
KATE F. MURPHY, 2nd year, 11 Carter Place	1885	600
MARY E. DREW, 1st and 2nd years, 36 Wamesit St.	1868	600
LIZZIE M. HADLEY, 1st year, 31 Royal St.	1869	600

EDSON GRAMMAR SCHOOL.

Highland Street.

C. W. BURBANK, Master, 130 Bowers St.	1872	\$2,000
FRANCES M. WEBSTER, 9th year, 45 Varney St.	1873	600
ROSALIE T. BURNS, 8th year, Rogers St., corner Butman Road	1878	600
ANNIE E. DONOVAN, 7th and 8th years, 26 Madison St.	1895	600
MARY F. WARD, 7th year, 220 Fletcher St.	1893	600
KATE J. HAVES, 6th year, 15 Floyd St.	1879	600

ROLL OF TEACHERS.

89

MARGIE F. MARREN, 5th and 6th years, 420 Fletcher St.	1886	600
SARAH J. CROSBY, 5th year, 339 Gorham St.	1868	600
BERTHA M. ROWLANDSON, 5th year, corner Holyrood Ave. and Hovey St.	1891	600
MARY A. BALCH, 4th and 5th years, 242 Appleton St. . .	1865	600
JULIA B. RIORDAN, 4th year, 252 Pawtucket St. . . .	1897	500

CHARLES STREET SCHOOL.

Charles Street, between Gorham and Chapel Streets.

ALICE T. OWENS, Principal, 3rd year, 4 Belmont St. .	1878	\$650
ELLA E. GARDNER, 2nd year, 109 Mansur St.	1871	600
ELLEN A. O'CONNELL, 2nd year, 48 Mead St.	1896	600
MARGARET M. HARRAHAN, 1st year, 32 Marshall St. .	1882	600

COTTAGE STREET SCHOOL.

Corner Cottage and Chapel Streets.

ROSE E. MCVEY, Principal, 2nd and 3rd years, 46 Linden St.	1887	\$625
LIZZIE A. MOLLOY, 1st and 2nd years, 239 Gorham St. .	1887	600

ELIOT SCHOOL.

Corner Favor and Summer Streets.

ELLEN A. STILLINGS, Principal, 1st and 2nd years, 24 Bellevue St.	1875	\$650
ELLEN A. CORBETT, 3rd year, 32 Highland St.	1878	600
NELLIE T. O'GRADY, 2nd year, 73 Newhall St.	1881	600
LOYOLA McCANN, 1st year, 17 Wentworth Ave.	1883	600

GREEN GRAMMAR SCHOOL.

Merrimack Street.

A. L. BACHELLER, Master, 43 Arlington St.	1874	\$2,000
RUTH B. BAILEY, 9th year, 514 Moody St.	1871	600
CLARA A. HANAFORD, 8th year, 1 Spaulding St. . . .	1869	600

ESTHER G. DONLAN, 8th year, 445 High St. . . .	1897	500
LIZZIE A. NOLAN, 7th year, 301 Pawtucket St. . .	1876	600
CARRIE A. MILES, 6th year, 318 Central St. . . .	1882	600
MARY M. KEARNEY, 6th year, 94 Andrews St. . .	1895	600
LENA A. GOOKIN, 5th year, 20 Walden St. . . .	1880	600
KATE F. MCCARTHY, 5th year, 647 Market St. . .	1889	600
ELLA J. CARLETON, 4th year, 1072 Bridge St. . .	1882	600
JENNIE E. FAY, 4th year, 115 Stackpole St. . . .	1891	600

KIRK STREET SCHOOL.

Corner Kirk and Lee Streets.

ELIZA A. DAVIS, Principal, 2nd and 3rd years, 100 Canton St.	1881	\$625
LAURA H. PALMER, 1st and 2nd years, 35 Thirteenth St.	1882	600

CABOT STREET SCHOOL.

Corner Cabot and Ford Streets.

NELLIE T. GILDAY, Principal, 1st year, 32 Varney St. .	1886	\$650
MARY J. MURPHY, 2nd year, 112 Jefferson St. . . .	1887	600
KATHARINE T. LENNON, 3rd year, 144 School St. . .	1885	600
MARY T. WHELLEY, 1st year, 1 Fenwick St.	1897	500

CHEEVER STREET SCHOOL.

Cheever Street.

IDA J. CLARKE, Principal, 1st year, 356 East Merrimack St.	1887	\$650
MARY E. MEEHAN, 2nd and 3rd years, 215 Worthen St.	1891	600
ANNA A. SARGENT, 1st year, 223 Liberty St. . . .	1864	600

WORTHEN STREET SCHOOL.

Worthen Street, between Market Street and Broadway.

MARY L. HILL, Principal, 3rd year, 228 Worthen St. .	1858	\$650
ESTHER V. GREEN, 2nd year, 674 Broadway	1889	600

MARY J. ALGER, 1st year, 74 Branch St.	1868	600
MARY R. MARREN, 1st year, 420 Fletcher St.	1890	600

HIGHLAND GRAMMAR SCHOOL.

(Telephone 729-2.)

Pine Street.

CHARLES W. MOREY, Master, 14 Belmont St.	1880	\$2,000
FLORA I. MOFFIT, 9th year 386 Westford St.	1887	600
MARY F. FOSS, 9th year, 215 Stevens St.	1891	600
ABBIE F. WOODWARD, 8th year, 157 Dartmouth St.	1869	600
ESTELLE L. WHITNEY, 8th year, 139 Chapel St.	1885	600
LEONORA K. BATTLES, 7th year, 147 Howard St.	1895	600
NELLIE A. COBURN, 7th year, 80 Royal St.	1886	600
LUELLA A. WARDWELL, 6th year, 33 Dover St.	1870	600
MINNIE C. GRAY, 6th year, 106 Liberty St.	1890	600
FANNIE M. CLARK, 5th year, 33 Dover St.	1874	600
CARRIE M. SPRAGUE, 4th year, 147 Howard St.	1890	600
GRACE R. SANDERS, 4th year, 67 South Loring St.	1897	500
GERTRUDE L. SPONHOLTZ, 5th year, 40 Marginal St.	1898	450

HIGHLAND ANNEX.

At Franklin School.

ARVILLA L. READER, 4th year, 216 Appleton St.	1871	\$600
GRACE F. WARD, 5th year, 6 Appleton Place	1893	600
ANNIE E. KING, 6th year, 223 Stackpole St.	1895	600

FRANKLIN SCHOOL.

Corner Branch and Middlesex Streets.

SARAH C. FISKE, Principal, 3rd year, 246 Appleton St.	1866	\$650
LIZZIE S. LOWE, 2nd year, 13 Nichols St.	1857	600
MARION J. STEVENSON, 2nd year, 63 Princeton St.	1878	600
KATE G. JONES, 1st year, 119 Andover St.	1880	600

PINE STREET.

Corner of Pine and Gibson Streets.

CARRIE J. BAILEY, Principal, 2nd and 3rd years, 16 Loring St.	1884	\$625
GRACE I. WASHBURN, 1st year, 15 Loring St.	1897	500

DOVER STREET.

Dover Street, between Middlesex and Grove Streets.

CLARA B. HORNE, Principal, 3rd year, 87 South High- land St.	1877	\$650
CLEMENTINE H. BOWERS, 2nd year, 18 Loring St.	1876	600
BERTHA GARDNER, 1st year, 32 Robbins Street	1887	600

MIDDLESEX VILLAGE.

HARRIET F. WAKEFIELD, Principal, 2 Loring St.	1889	\$625
MARTHA ROGERS, 131 Cumberland Road	1895	600

POWELL STREET.

Powell Street, near Liberty Street.

VIOLA A. HAMBLETT, Principal, 1st and 2nd years, 463 School St.	1876	\$625
LILLIAN L. SPROAT, 2nd and 3rd years, 57 Claire St.	1895	600

ABRAHAM LINCOLN GRAMMAR SCHOOL.

Chelmsford Street.

JAMES L. MELLEN, Master, 233 Fayette St.	1893	\$1,700
MARGARET M. SPARKS, 9th year, 11 Fort Hill Ave.	1894	600
GRACE SCRIBNER, 8th year, 190 Liberty St.	1893	600
ANNA A. BURNHAM, 7th year, 11 Puffer St.	1894	600
IRMA V. HODGMAN, 6th year, 23 Whitney Ave.	1897	500
MARY A. GORMAN, 5th year, 76 Charles St.	1895	600

ROLL OF TEACHERS.

93

ELLEN L. FLOYD, 5th year, 124 Stevens St.	1887	600
ELLA E. PRESCOTT, 4th year, 58 Pine St.	1894	600
ANNIE R. CHASE, 4th year, 19 Robinson St.	1897	500

HOWARD STREET.

Howard Street, between Chelmsford and Hale Streets.

MARION E. GREENE, Principal, 3rd year, 143 Howard St.	1884	\$650
ALICE C. GREENE, 2nd year, 143 Howard St.	1894	600

GRAND STREET.

(Howard Street Annex.)

Grand Street, between Westford and Middlesex Streets.

JENNIE M. BENNETT, 1st year, 94 Dover St.	1885	\$600
MINNIE A. WILSON, 1st year, 28 Cambridge St.	1887	600

PLAIN STREET.

Corner Plain and Powell Streets.

LAURA E. LEE, Principal, 1st year, 189 Grand St.	1873	\$650
FLORA H. SPRAGUE, 3rd year, 589 School St.	1882	600
MARY A. FARNHAM, 2nd and 3rd years, 90 Gates St.	1887	600
LILLA M. STANLEY, 2nd year, 1 Horn St.	1897	500
EMILY S. ABBOTT, 1st year, Cor. Plain and Fruit Sts.	1898	450

MOODY GRAMMAR SCHOOL.

Corner High and Rogers Streets.

WILLIAM S. GREENE, 454 Andover St.	1883	\$2,000
MERCENA F. WHITEHORN, 9th year, 519 Beacon St.	1877	600
CARRIE A. PAUL, 8th year, 60 Fort Hill Ave.	1891	600
IDA L. SAMUELS, 7th year, Fifth Ave.	1898	450
ELIZABETH W. FROST, 6th year, 60 Fort Hill Ave.	1857	600

ELLA M. BREEN, 6th year, 23 Marsh St.	1893	600
FRANCES E. GARITY, 5th year, 34 Read St.	1874	600
FRANCES E. HARDMAN, 4th year, 263 Fairmount St.	1873	600
NELLIE C. MAHONEY, 4th year, 17 North St.	1898	450

POND STREET.

Corner High and Pond Streets.

MARIETTA HILL, Principal, 3rd year, 303 East Merrimack St.	1870	\$650
WINNIFRED HAGGERTY, 2nd year, 52 Huntington St.	1884	600
ADELAIDE CROWLEY, 1st year, 115 Fort Hill Ave.	1894	600

HIGH STREET.

High Street, between Chestnut and Everett Streets.

CLARA A. EMERSON, Principal, 2nd and 3rd years, 216 Appleton St.	1869	\$625
ELIZABETH WORTHLEY, 1st and 2nd years, 27 Canada St.	1891	600

FAYETTE STREET.

Fayette Street, between Chestnut and Everett Streets.

GEORGIA A. HARDEN, Principal, 2nd and 3rd years, 149 Pleasant St.	1885	\$625
MARY A. MEEHAN, 1st and 2nd years, 100 Bourne St.	1895	600

SYCAMORE STREET.

Sycamore Street.

JEANETTE T. COSTELLO, 2nd and 3rd years, 293 Nesmith St.	1893	\$625
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PAWTUCKET GRAMMAR SCHOOL.

Mammoth Road, Pawtucketville.

WILLIAM P. BARRY, Master, 1280 Middlesex St.	1887	\$2,000
ELLEN M. MACDONALD, 9th year, 290 East Merrimack St.	1878	600

ROLL OF TEACHERS.

95

CARRIE M. HART, 8th year, 16 Varney St	1887	600
ELIZABETH A. HART, 7th year, 16 Varney St.	1886	600
EFFIE I. MARSHALL, 6th year, 28 Riverside St.	1887	600
JULIA M. HEALEY, 5th year, 108 Bowers St.	1870	600
GOLDIE M. GARDNER, 4th year, 56 Willie St.	1898	450

NEW MOODY STREET SCHOOL.

ELLEN M. HOLDEN, Principal, 3rd year, 21 Eighth Ave.	1876	\$650
EUGENIA L. Hogan, 2nd year, 4 Crane's Ave.	1889	600
NELLIE F. DAVIDSON, 2nd year, 20 Lombard St.	1891	600
ALICE B. BESSE, 1st year, 581 Rogers St.	1891	600
FANNIE A. HARDY, 1st year, 22 Third St.	1890	600

LEXINGTON AVENUE.

Lexington Avenue, near Varnum Avenue.

HELEN KOHAWN, ungraded, 63 Thirteenth St.	1877	\$625
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VARNUM GRAMMAR SCHOOL.

Myrtle Street, Centralville.

HENRY H. HARRIS, Master, 26 Massachusetts Corp.	1893	\$1,700
ELIZABETH C. KENNEDY, 9th year, 42 Eighteenth St.	1884	600
MARY F. WING, 9th year, 99 Third St.	1879	600
ELIZABETH F. BLANDIN, 8th year, 61 Durant St.	1896	600
GRACE W. BALCH, 7th year, 434 Westford St.	1894	600
SARAH A. BRADLEY, 6th year, 555 Bridge St.	1857	600
ALICE R. KEESE, 6th year, 4 Sanborn St.	1881	600
MARY A. FAY, 6th year, Tenth St.	1898	450
AGNES T. FAY, 5th year, Tenth St.	1891	600
ELIZABETH F. GARRA, 5th year, 109 Bartlett St.	1893	600
ADA E. Hoole, 5th year, 173 Warren St.	1894	600
ROSA A. DOWD, 5th year, 237 Tenth St.	1884	600
ALICE M. MAGOON, 4th year, 64 Oak St.	1898	450
JULIA WILLIAMS, 4th year, 640 Bridge St.	1886	600
LENA M. ROBINSON, 4th year, 68 South Walker St.	1898	450

WEST SIXTH STREET SCHOOL.

West Sixth Street, between Coburn and Jewett Streets, Centralville.

STELLA J. ALLEN, Principal, 3rd year, 115 Third St.	. 1879	\$650
LIZZIE F. LAMERE, 2nd and 3rd years, 829 Bridge St.	. 1885	600
MARION S. KEVES, 2nd year, 102 Third St.	. . . 1888	600
MARY J. CALLAHAN, 1st year, 117 Durant St.	. . . 1895	600

TENTH STREET SCHOOL.

Corner Tenth and Varnum Streets, Centralville.

MARY F. BEANE, Principal, 3rd year, 212 Tenth St.	. 1879	\$650
FANNIE H. MURPHY, 2nd and 3rd years, 42 Twelfth St.	. 1889	600
ALICE A. HOLTHAM, 1st and 2nd years, 1107 Bridge St.	. 1887	600
ELLA A. BAILEY, 1st year, 55 Varnum Street	. . . 1869	600

LAKEVIEW AVENUE.

Lakeview Avenue, Centralville.

MARIETTA F. CROWLEY, Principal, 3rd year, 33 Marion Street.	. . . . . 1879	\$650
AGNES T. COURTNEY, 2nd year, 11 Marsh Street	. . 1891	600
MARGARET J. MCCLUSKEY, 1st year, 161 Lakeview Avenue	1890	600
LILLIAN C. WHOLEY, 1st year, 359 Stevens Street	. . 1894	600

BILLINGS STREET.

MALVINA LAMERE, Principal, 1st year, 6 West Eleventh Street	. . . . . 1894	\$625
ANNIE M. ROBBINS, 2nd and 3rd years, 62 Twelfth Street	1895	600

KINDERGARTENS.

VARNUM SCHOOL.

NETTIE M. CONANT, Principal, 21 Osgood Street	. . 1892	\$500
CLARA M. EVERETT, 945 Middlesex Street	. . . 1896	450
JOSEPHINE GOULD, 162 Branch Street	. . . 1897	450

ROLL OF TEAGHERS.

97

DOVER STREET.

ELIZABETH A. WILSON, 77 Dover Street . . .	1893	\$500
EDITH A. ANDREWS, 278 High Street . . .	1897	450

MOODY SCHOOL.

MARY C. WALKER, Principal, 100 Appleton Street .	1893	\$500
EDITH A. HOWITT, 45 Myrtle Street . . .	1897	450

PINE STREET.

LOUIE I. SMITH, Principal, 69 Nichols Street . . .	1895	\$500
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TRAINING SCHOOL.

MABEL D. NICKERSON, Principal, 53 Nesmith Street .	1893	\$500
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BARTLETT SCHOOL.

E. BELLE PERHAM, Principal, 100 Riverside Street .	1893	\$500
CLARE S. REED, 11 Nesmith Street . . .	1896	450

AGAWAM STREET.

SARAH G. SPARKS, Principal, 59 Elm Street . . .	1894	\$500
GERTRUDE A. ROBERTS, 52 Parker Street . . .	1897	450

LINCOLN SCHOOL.

ELLEN J. PIPER, Principal, 50 Washington Street .	1894	\$500
ROSEMARY LENNON, 39 Carter Street . . .	1895	450

CHAPEL STREET.

MARIETTA G. GERMLEY, Principal, 22 Lyon Street .	1895	\$500
KATHERINE C. EARLEY, 172 Concord Street . . .	1896	450

ROLL OF TEACHERS.

FRANKLIN SCHOOL.

N. GRACE TAYLOR, Principal, 118 Bartlett Street . . .	1895	\$500
HELEN W. NOYES, 49 Nesmith Street	1896	450

PAWTUCKET.

M. MARIETTA KING, Principal, 223 Stackpole Street . . .	1895	\$500
S. HORTENSE TABOR, 82 Riverside Street	1896	450

WORTHEN STREET.

ELSIE CRAGIN, Principal, 114 South Walker Street . . .	1895	\$500
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SUPERVISOR OF KINDERGARTENS.

ANNA W. DEVEREAUX, 73 Nesmith Street	1893	\$500
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TEACHERS OF PENMANSHIP.

THOMAS M. GRAVES, 114 Beech Street	1883	\$1,250
JOHN J. HUNT, 172 Pleasant Street	1894	900

MUSICAL DIRECTOR.

FREDERICK O. BLUNT, 50 Chelmsford Street	1898	\$1,100
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TEACHER OF DRAWING.

OLIVE E. UNDERHILL, 117 Branch Street	1887	\$1,250
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TEACHER OF SEWING.

IDA J. FLINT, 200 Liberty Street	1880	\$800
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MILITARY INSTRUCTOR

ALEXANDER GREIG, JR., 38 Fourth Ave	1891	\$250
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TRAINING SCHOOL GRADUATES.

CLASS OF JUNE, 1897.

Marguerite J. Cronin, 228 Plain Street.
 Grace C. Delaney, 791 Broadway.
 Annie T. Delay, 87 Mt. Washington Street.
 Mabel H. Ela, 407 Walker Street.
 Margaret C. Fox, 8 Eddy Street.
 Julia G. Halloran, 546 E. Merrimack Street.
 Daisy B. McBrayne, 24 Beech Street.
 Helen J. O'Hearn, 566 Market Street.
 Bride T. Sweeney, 102 Pleasant Street.
 Carrie B. Price, Hadley Street.
 Lulu Turner, 24 Bellevue Street.

CLASS OF FEBRUARY, 1898.

Agnes Bailey, 53 Third Street.
 Evangeline C. Demers, 82 Lawrence Street.
 M. Josephine Donehue, 175 Coburn Street.
 Addie E. Edwards, 24 Bellevue Street.
 Maud E. Green, 238 E. Merrimack Street.
 Elizabeth D. Hovey, 481 Beacon Street.
 Margaret F. Howe, 5 Appleton Corp.
 Bertha MacCue, 217 Appleton Street.
 Flora A. Owen, 84 First Street.
 Florence E. Rowell, 640 Bridge Street.
 Alice D. Sunbury, 1 Spaulding Street.
 Mary G. Tunny, 799 Moody Street.
 Harriet S. Wheeler, 11 Myrtle Street.

CLASS OF JUNE, 1898.

S. Blanche Brigham, 19 Third Street.
 Mabel E. Brown, 290 Westford Street.
 Etta G. Burns, 154 Perry Street.
 Annie J. Devine, 110 Carlisle Street.

Etta Foye, 127 Durant Street.
 Julia A. Kenney, 99 Washington Street.
 Katherine H. Law, 947 Middlesex Street.
 Sadie F. McCort, 397 Worthen Street.
 Elizabeth T. Moore, 242 Liberty Street.
 Annie S. Murphy, 1 Carter Place.

CLASS OF FEBRUARY, 1899.

Elizabeth M. Butler, 142 Third Street.
 Corinna G. Cover, 16 Lombard Street.
 Maude M. Hardy, 72 Cambridge Street.
 Josie V. Hoar, 87 Mt. Washington Street.
 Delia C. Maloney, 70 Elm Street.
 Elizabeth A. Page, 647 Market Street.
 Elsie M. Puffer, 942 Middlesex Street.
 Mary E. Snow, 89 School Street.

SALARIES OF TEACHERS.

HIGH SCHOOL.

Head Master	\$2,500 00
First Sub-Master	2,200 00
Men Assistants	800 00 to 1,500 00
First Woman Assistant	900 00
Other Women Assistants, first year	650 00
Assistants, second year	700 00
Assistants, third year	800 00

GRAMMAR SCHOOLS.

Masters	\$1,300 00 to \$2,000 00
Assistants, first year	450 00
Assistants, second year	500 00
Assistants, third year and after	600 00
Teacher of Penmanship	1,250 00
Teacher of Drawing	1,250 00
Teacher of Music	1,100 00

PRIMARY SCHOOLS.

Teachers, first year	\$450 00
Teachers, second year	500 00
Teachers, third year and after	600 00
Principals of two rooms	625 00
Principals of three or more rooms	650 00

TRAINING SCHOOL.

Principal	\$2,000 00
Two Assistants	900 00
One Assistant	800 00

KINDERGARTENS.

Principals	\$500 00
Assistants, first year	350 00
Assistants, after first year	450 00

TEMPORARY TEACHERS.

Men teachers, for every school-day's service	\$3 00
Women teachers in High School, for every school-day's service	1 75
Women teachers in other schools, for every school-day's service	1 25
Graduates of Training School, after three months' service	2 25

EVENING SCHOOLS.

Principal, High School, per evening	\$3 50
Principals, Elementary Schools, per evening	2 00
Assistants, High School, per evening	2 00
Women Assistants, Elementary Schools, per evening	1 25

TEXT-BOOKS USED IN THE PUBLIC SCHOOLS.

PRIMARY SCHOOLS.

First Reader, New Franklin Series.	American Music Reader
Second Reader, New Franklin Series.	American Music Chart.
Advanced 2d Reader, New Franklin Series.	Blaisdell's Child's Book of Health.
Franklin Primary Arithmetic.	Heath's Vertical Writing Books.
Monroe's Reading Chart.	

GRAMMAR SCHOOLS.

Third Reader, New Franklin Series.]	Frye's Common School Geography.
Fourth Reader, New Franklin Series.	Goodrich's Child's Book of History.
Intermediate Reader, New Franklin Series.	Scudder's History and Short History of the United States.
Fifth Reader, New Franklin Series.	Fiske's History of the United States.
Scudder's Fables and Folk Stories.	Thomas's History of the United States
De Foe's Robinson Crusoe.	Union Series of Physiologies.
Burrough's Birds and Bees.	Wentworth's Elementary Algebra.
Hawthorne's Wonder Book.	Worcester's New Pronouncing Speller.
American Literature, Masterpieces.	Worcester's Comprehensive Dictionary.
Bradbury's Eaton's Practical Arithmetic.	Werner Mental Arithmetic.
Tarbell's Lessons in English.	Heath's Vertical Writing Books.
Southworth and Goddard's Grammar.	American Music Readers.
Butler's Elementary Geography.	Meservey's Book-keeping.
Butler's Grammar School Geography.	
Frye's Primary Geography	

HIGH SCHOOL.

CHEMISTRY, PHYSICS, AND OTHER SCIENCES.

Appleton's Chemistry.	School Physics, Avery.
Elements of Chemistry, Avery.	Botany, Gray.
Elements of Chemistry, Shepard.	Dana's Geological Reader.
Eliot and Storer's Qualitative Analysis.	Geology, Le Conte.
Qualitative Analysis, Hill.	Herbarium, Wilson.
A Text-book of Physics, Hall-Bergen.	Lessons in Astronomy, Young.
Elements of Physics, Avery.	Physiology, Kellogg.
Physics by Experiment, Shaw.	Tarr's Physical Geography.

ENGLISH.

Ancient Mariner, Coleridge.	Manual of English Literature, Arnold
Burke's Speeches, Delby.	Merchant of Venice, Shakespeare.
Carlyle's Essay on Burns.	Milton and Addison, Macaulay.
Christmas Carols, Dickens.	Milton's Lyrics, Hodgkins.
Classics, Hawthorne.	Palamon and Arcite, Dryden.
Conciliation with America, Burke.	Paradise Lost, Milton.
Cooper's Last of the Mohicans.	Pope's Iliad.
De Foe's History of the Plague, Carpenter.	Principles of Rhetoric, Hill.
De Quincey's Revolt of the Tartars.	Scott's Marmion, Dalgleish.
Eliot's Silas Marner, Norris.	Selected American Poems.
English Composition, Shaw.	Selected Ballads and Lyrics, Lodge.
English Grammar, Meiklejohn.	Select Essays of Macaulay, Chalmers.
Exercises in English, Strong.	Shakespeare's Plays, Hudson.
First Bunker Hill Oration, Webster.	Sir Roger de Coverley Papers, Addison.
Foundations of Rhetoric, Hill.	Sketch Book, Irving.
Guy Mannering, Scott.	Southey's Life of Nelson.
Hand-book of English Literature, Underwood.	Story of the Odyssey, Church.
House of the Seven Gables, Hawthorne.	Tales from Shakespeare, Lamb.
Hereward the Wake, Kingsley.	Tales of a Wayside Inn, Longfellow.
Homer's Iliad, Church.	Talisman, Scott.
Iliad, Dryden.	Tanglewood Tales, Hawthorne.
Irving's Tales of a Traveler, Carpenter.	Thanatopsis, Bryant.
Ivanhoe, Scott.	The Classic Myths.
Kenilworth, Scott.	The Princess, Tennyson.
Lady of the Lake, Scott.	Twice Told Tales, Hawthorne.
Lessons in English, Buchler.	Vicar of Wakefield, Goldsmith.
Lessons in English.	Westward Ho, Kingsley.
Lessons in English, Lockwood.	Wonder Book, Hawthorne.
Life of Samuel Johnson, Macaulay.	Woodstock, Scott.
Macbeth, Shakespeare.	Young Folk's Plutarch, Rosalie Kaufman.

FRENCH.

Bug-Jargal, Hugo.	La Belle Nivernaise, Daudet.
Capi et sa Troupe.	La Famille de Germandre, Sand.
College Plays, Bocher.	La Fontaine's Fables, Mme. Beck's Edition.
Complete French Course, Chardenal.	La Siege de Berlin.
Easy French Readings, Fisher.	La Tache du Petit Pierre.
Exercises, No. 1, Grandgent.	La Voyage de Monsieur Perrichon, Labiche.

French Composition, Grandgent.	Martin.
French Dictionary, Heath.	Le Conscriit de 1813, Erckmann-Chatrian.
French Grammar, Grandgent.	Le Cure de Tours, Balzac.
French Grammar, Otto-Bocher.	Les Precieuses' Ridicules, Moliere.
French Grammar, Worman.	Methode Berlitz, Part I.
French Lyrics, Bowen.	Methode Berlitz, Part II.
French Reader, Super.	Pecheur d'Islande, Loti.
Grammaire Francaise, Larive et Fleury, Readings from French History, Super.	
2me An.	

GERMAN.

Berlitz Reader.	German Dictionary, Elwell.
Die Schonsten Deutschen Lieder, Wencke-	German Grammar, Otto.
bach.	Immensee, Storm's.
Eisenbach's German Lessons, Collar.	

GREEK.

Anabasis.	Greek Lexicon, Liddell and Scott.
Greek Composition, Higley.	Greek Lexicon, White.
Greek Composition, Woodruff.	Greek Reader, Goodwin.
Greek Grammar, Goodwin.	Homer's Iliad, Seymour.
Greek Lessons, White.	

HISTORY.

Ancient History, Myers.	History of Greece, Pennell.
English History, Montgomery.	History of Rome, Allen.
Fiske's School Histories.	Johnston's American History.
General History, Myers.	Outlines of History, Swinton.
Greek History, Oman.	Sanderson's History.

LATIN.

Cæsar, Allen and Greenough.	Latin Lexicon, White.
Cicero, Allen and Greenough.	Nepos, Barss.
First Latin Book, Collar and Daniell.	New Latin Composition.
Gate to Cæsar, Collar.	Ovid, Allen and Greenough.
Latin Composition, Part I., Daniell.	Sallust.
Latin Composition, Part II., Daniell.	Virgil, Allen and Greenough.
Latin Composition, Collar.	Virgil, Brice.
Latin for Sight Reading, Tomlinson.	Viri, Romæ, Rolfe.
Latin Grammar, Allen and Greenough.	

MATHEMATICS.

Academic Algebra, Wells.	Higher Algebra, Wells.
Arithmetic, Wentworth and Hill.	Surveying, Davies.
Geometry, Plane and Solid, Wentworth.	Trigonometry, Bradbury.
Geometry, Wells.	

SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS OF THE CITY OF LOWELL FOR THE YEAR ENDING DECEMBER, 1898.

SCHOOL.	LOCATION.	Whole No. Enrolled.			No of pupils belonging Dec., 1898.			Whole No. of pupils on time books since Jan. 1, 1898.			Average No. of pupils belonging to school.			Average daily attendance.			No. not rec'd from any other pub. school.							No. years of age.					Per cent. of attendance.	
		Total.			Total.			Total.			Total.			Total.			No. not rec'd from any other pub. school.							No. years of age.					Per cent. of attendance.	
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	R'cd from other pub. schools of lower grade.	R'cd from other pub. schools of same grade.	Sent to other public sch's of higher grade.	Sent to other public schools of same grade.	No. over 14 years of age.	No. between 10 and 14 years of age.	No. between 6 and 10 years of age.	Number under 6 years of age.	Per cent. of attendance.					
High	Kirk and Anne Sts.	344	435	779	325	431	756	475	584	1059	336	417	753	321	400	721	55	280	...	39	...	...	1020	39	...	...	...	...	96
Bartlett (Gram)	Wannalancit St.	265	244	509	219	25	424	322	302	624	226	204	430	210	188	398	58	78	37	40	33	...	225	350	40	...	...	...	93
PRIMARIES.																														
Cross St.	Cross St., near Mt. Vernon St.	115	98	213	80	84	164	128	114	242	88	73	156	78	70	148	99	10	19	31	14	...	...	40	175	37	95	...	...
Morrill.	Adams and Common Sts.	125	92	217	6	16	152	141	105	246	84	59	143	78	53	131	62	...	29	27	33	...	...	2	25	144	55	...	...
Bartlett.	Wannalancit St.	49	38	87	58	52	110	65	52	117	62	50	112	54	43	97	22	15	15	13	4	...	1	...	8	104	4	87	...	
Totals for Primaries.																														
Butler (Gram)	Gorham St.	362	327	689	350	343	699	480	440	920	342	333	675	319	312	631	55	172	59	63	29	25	179	563	178	...	...	...	94
PRIMARIES.																														
Agawam St.	Cor. Agawam and Barrington Sts.	74	59	133	57	52	109	91	78	169	63	49	112	59	45	104	27	20	16	28	14	...	...	10	136	23	94	...	...
Carter St.	Carter St.	166	15	181	132	101	233	186	160	346	130	107	237	119	96	215	84	...	30	47	34	...	...	37	215	94	90	...	...
London St.	Cor. London and West Sts.	80	82	162	63	57	120	89	86	175	61	54	115	56	49	105	45	28	13	26	9	1	...	22	127	26	91	...	...
Lyon St.	Cor. Central and Ly ns Sts.	115	90	205	77	58	135	134	101	235	81	66	147	76	62	138	95	...	30	53	31	...	1	23	161	50	94	...	...
Weed St.	Cor. Gorham and Weed Sts.	81	72	153	66	47	113	92	78	170	66	50	116	59	47	106	42	...	17	32	16	...	...	12	138	20	94	...	...
Totals for Primaries.																														
Training (Gram)	Lawrence St.	191	168	359	158	143	301	244	223	467	162	145	307	146	129	275	14	88	20	21	19	28	112	231	16	...	...	...	90
PRIMARIES.																														
Ames St.	Cor. Ames and Lawrence Sts.	91	88	179	70	70	140	112	111	223	68	63	131	64	58	122	75	18	26	29	23	...	...	36	134	53	93	...	...
Central St.	Central St., opp. Hudson St.	9	13	222	73	96	169	117	142	259	72	92	164	67	83	150	52	9	28	47	22	...	...	46	183	30	91	...	...
Training.	Charles, near Lawrence St.	112	119	231	90	79	169	153	143	296	84	82	166	71	67	138	60	15	50	30	39	1	3	50	165	13	84	...	...
Totals for Primaries.																														

SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS.—Continued.

Edson (Gram).... PRIMARIES.	231	253	484	205	231	436	286	312	598	209	237	446	196	221	477	24	93	21	22	25	8	143	411	44	....	94
Charles St., near Gorham St.....	103	92	195	85	67	152	123	107	230	77	72	149	72	68	140	54	....	35	29	35	....	2	36	169	29	94
Cor. Cottage and Chapel Sts.....	66	78	144	50	42	92	73	96	169	41	78	89	39	45	81	28	4	21	27	20	1	22	104	42	94		
Cor. Summer and Favor Sts.....	109	117	226	62	81	143	125	132	257	61	75	136	56	68	121	109	....	31	25	40	1	3	47	173	34	91
Totals for Primaries.....	278	297	575	197	190	387	321	335	656	179	195	374	107	181	348	101	4	87	75	102	1	6	99	446	105	93	
Green (Gram).... PRIMARIES.	312	252	564	250	240	490	369	328	697	239	213	452	225	200	425	100	96	37	27	21	10	245	388	64	....	94
Cabot St., near Cabot and Ford Sts.....	157	117	274	76	64	140	167	120	287	71	53	124	64	49	113	135	....	13	30	23	2	25	82	158	22	90
Cor. Cheever and Tucker Sts.....	131	78	209	56	29	85	134	79	213	46	27	73	42	25	67	209	....	4	10	3	10	22	52	83	56	92
Cor. Kirk and Lee Sts.....	61	50	107	43	23	71	74	60	134	40	25	68	37	28	62	42	4	23	22	24	2	7	29	89	9	92	
Worthen St., bet. Delway & Market Sts.....	140	146	286	82	95	177	182	197	379	84	95	179	77	84	161	91	8	32	55	24	....	3	63	236	77	89
Totals for Primaries.....	489	391	876	257	216	473	557	456	1013	241	203	444	220	183	403	477	12	72	117	74	14	57	226	566	164	91	
Highland (Gram).... PRIMARIES.	373	393	766	349	344	693	463	476	939	344	345	689	319	314	633	39	123	50	56	42	....	291	556	92	....	92
Dover St., near Grove St.....	63	78	141	54	73	127	80	98	178	59	63	113	46	57	103	27	20	17	28	14	....	....	4	149	23	91
Cor. Pine and Gibson Sts.....	38	45	86	35	37	72	52	52	104	32	36	68	28	32	60	14	7	11	17	1	....	....	4	77	23	88
Junction of Branch and Middlesex Sts.....	131	134	265	90	88	178	163	171	334	84	92	176	73	81	154	54	23	46	40	73	....	8	70	239	17	88
Cor. Chelmsford and Plain Sts.....	151	116	267	127	116	243	185	151	336	121	105	226	110	93	203	60	22	47	43	30	....	....	54	222	60	90
Powell St., near Liberty St.....	54	54	105	37	29	66	63	63	128	42	35	77	38	32	70	20	5	15	19	....	....	....	7	99	22	91
Totals for Primaries.....	437	430	867	313	343	686	545	535	1080	329	331	660	295	295	590	175	77	136	158	137	....	8	139	786	147	89.6
A. Lincoln (Gram).... PRIMARIES.	178	223	401	193	189	382	237	277	514	174	201	375	164	190	354	33	84	29	20	12	5	156	317	41	....	94
Howard St.....	121	112	233	85	76	161	147	139	276	84	71	155	76	62	138	69	1	42	32	21	2	5	44	204	23	89	
Totals for Primaries.....	121	112	233	85	76	161	147	139	276	84	71	155	76	62	138	69	1	42	32	21	2	5	44	204	23	89	
Cor. Rogers and High Sts.....	178	187	365	174	175	349	202	215	417	177	173	350	168	160	325	30	39	13	42	19	3	102	241	74	....	94
Fayette, bet. Chestnut and Everett Sts.....	52	39	91	30	27	57	61	49	110	36	26	62	31	28	54	36	....	19	15	27	....	2	22	84	2	87
High, bet. Chestnut and Everett Sts.....	50	50	106	44	33	77	66	131	30	62	71	36	31	57	29	10	15	13	19	....	....	16	89	26	94	
Sycamore St., near Wentworth Ave.....	35	19	54	25	12	37	39	22	61	28	13	41	25	12	37	11	4	3	....	2	....	....	11	32	11	88
Cor. Pond and High Sts.....	86	72	152	70	50	120	108	92	200	63	50	113	56	45	101	33	23	25	35	21	1	12	149	38	89
Totals for Primaries.....	217	186	403	169	122	291	274	228	502	166	121	287	148	111	259	112	37	62	53	69	....	3	61	354	77	89.5
Cor. Mammoth Road and Fourth Ave.....	145	135	280	117	121	238	172	167	339	120	113	233	117	109	126	29	35	24	25	15	3	105	205	29	....	97
Moody St., opp. Fourth Ave.....	131	135	266	93	127	220	155	168	323	104	118	222	95	106	201	74	23	34	30	26	1	1	20	257	36	91	
Totals for Primaries.....	131	135	266	93	127	220	155	168	323	104	118	222	95	106	201	74	23	34	30	26	1	1	20	257	36	91	

SUMMARY OF THE ANNUAL RETURNS OF THE PUBLIC SCHOOLS.—Continued.

SCHOOL.	LOCATION.	Whole No. Enrolled.			No. of pupils belonging Dec. 1898.			Whole No. of pupils on books since Jan. 1, 1898.			Average No. of pupils belonging to school.			Average daily attendance.			No. sent to other pub. sch's of higher grade.	No. having certificates of schooling for mills.	No. between 10 and 14 years of age.	No. between 6 and 10 years of age.	Number under 6 years of age.	Percent of attendance.							
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.																
Varnum (Gram) PRIMARIES.	Myrtle and Beech Sts., Centralville.....	387	358	745	338	309	647	455	445	900	339	314	653	318	290	608	101	132	23	54	25	20	185	579	136	....	94	
	Billings St., near Hildreth St.....	82	56	136	47	46	93	88	72	160	50	41	91	45	35	80	40	3	21	20	25	....	2	19	94	46	87	
	L. V. Ave., bet. West St. and Lilley Ave..	136	108	243	87	69	156	133	115	248	85	69	154	79	63	142	92	....	34	39	29	4	5	70	140	83	93	
	Tenth St., Cor. Varnum St.....	99	114	213	83	97	180	133	145	278	72	85	157	66	77	143	40	26	39	47	25	....	4	62	228	21	91	
	W. 6th, bet. Colburn and Jewett Sts.....	119	105	224	95	65	160	155	122	277	89	66	155	83	60	143	62	15	38	32	38	....	4	62	195	16	92	
Totals for Primaries.....		456	383	837	312	277	589	559	454	1013	296	261	557	273	235	508	234	44	132	138	117	4	11	180	657	106	91		
MIXED SCHOOLS.	Cor. Middlesex and Connell Sts.....	60	68	128	43	50	93	63	74	137	41	45	86	37	38	75	128	....	9	16	2	2	29	77	20	88	....	
	Middlesex Village Lexington Ave.....	24	13	37	16	14	30	29	22	51	17	11	28	18	12	30	37	....	14	5	10	....	4	20	23	4	93	
	Totals for Mixed Schools.....	84	81	165	59	64	123	92	96	188	58	56	114	55	50	105	165	....	23	14	26	2	6	49	100	24	90.5	
KINDERGARTENS.																													
Agawam St. Bridge St. Chapel St. Dover St. Bartlett. Franklin A. Lincoln. Moody. Pawtucket. Training School. Wo then St. Pine St.	Agawam St., Primary School Building..	36	44	80	23	16	39	36	44	80	16	22	38	13	17	30	80	....	20	....	....	....	....	....	....	....	80	86
	Parker Block, Bridge St.....	62	68	130	32	36	68	63	69	132	30	33	63	26	26	52	130	....	2	52	....	....	....	....	....	....	132	83
	Cor. Chapel and Keene Sts.....	53	29	82	26	13	39	54	31	85	23	14	37	22	12	34	82	....	3	36	1	....	....	....	....	....	84	92
	Dover St., bet. Branch and Grove Sts....	42	51	93	20	20	40	43	51	94	19	20	39	16	16	32	93	....	1	30	5	....	....	....	....	....	88	82
	Bartlett School B'ldg., Wannalancit St.	28	41	69	13	22	35	28	43	71	11	23	34	9	20	29	23	2	24	18	53	85
	Franklin School B'ldg., Blanch St.....	48	42	90	20	25	45	48	43	91	18	17	35	15	13	28	....	....	1	26	2	....	....	....	....	....	90	80
	A. Lincoln School B'ldg., Rogers St.....	55	63	118	29	27	56	66	68	135	25	26	51	21	21	42	....	....	1	25	1	....	....	....	....	....	112	81
	Moody School B'ldg., Chelmsford St....	67	67	134	31	35	66	67	68	135	36	35	71	27	25	52	134	....	1	53	1	....	....	....	....	....	134	73
	Pawtucket School B'ldg., Charles St.....	32	49	81	17	19	36	32	45	87	13	13	26	8	13	21	68	....	2	....	....	....	....	....	....	....	35	81
	Training School B'ldg., Charles St.....	24	44	68	11	14	25	24	45	69	13	17	30	9	14	23	....	....	1	....	....	....	....	....	....	....	69	70
	Wo then St., School Building.....	33	46	79	10	17	27	33	46	79	12	18	30	8	13	21	68	....	1	....	....	....	....	....	....	....	79	77
	Cor. Pine and Gibson Sts.....	9	12	21	8	12	20	9	12	21	8	10	18	6	8	14	16	....	....	....	....	....	....	....	....	....	21	78
	Totals for Kindergartens.....		489	556	1045	240	256	496	493	566	1059	224	254	478	183	200	383	717	19	320	12	34	977	81
SUMMARY.—High School.....		344	435	779	325	431	756	475	584	1059	336	417	753	321	400	721	55	280	585	940	313	96
Grammar Schools.....		2622	2540	4862	2359	2200	4605	2372	2278	4610	2182	2113	4195	488	940	1428	488	940	313	838	966	785	24	98	1087	4952	1123	91
Primary Schools.....		3229	2942	6165	2318	2103	4421	3866	3475	7341	2258	2045	4298	2055	1846	3901	1935	313	838	966	785	24	98	1087	4952	1123	91
Mixed Schools.....		84	81	165	59	64	123	92	96	188	58	56	114	55	50	105	165	23	14	26	2	6	49	100	24	90.5
Totals, not including Kindergartens.....		6279	5998	11,971	5661	4898	9905	7663	7340	15,003	5024	4796	9775	4613	4409	8922	2703	1533	1174	1389	1051	128	2867	5016	5766	1147	92.7

AUDITOR'S
SIXTY-THIRD ANNUAL REPORT
OF THE
RECEIPTS AND EXPENDITURES
OF THE
CITY OF LOWELL, MASS.,
TOGETHER WITH THE
TREASURER'S ACCOUNT AND THE ACCOUNT OF THE COMMIS-
SIONERS OF SINKING FUNDS, FOR THE FINANCIAL
YEAR ENDING DECEMBER 31, 1898.



LOWELL, MASS.:
PRINTED BY THOMPSON & HILL.—THE VOX POPULI PRESS.
1899.

AUDITOR'S REPORT

OF THE

RECEIPTS AND EXPENDITURES

For the Year Ending Dec. 31, 1898.

AUDITOR'S REPORT.

CITY OF LOWELL,
AUDITOR'S OFFICE, Jan. 1, 1899.

TO THE CITY COUNCIL:

Gentlemen:—In conformity with the requirements of the Ordinances of the City, I have the honor to present the Sixty-third Annual Report of the Receipts and Expenditures of the City of Lowell for the year ending Dec. 31, 1898, exhibiting the same as classified in the several department accounts, with the value of the Real and Personal Property in charge of the several departments, and a statement of the City Debt and Debts due the City.

RECEIPTS.

The whole amount of money received into the City Treasury, from all sources, from Jan. 1, to Dec. 31, 1898, was.....

§ 3,566,632 46

Of this amount there was received
on account of

General Treasury Fund.....	\$ 3,297,874	23
Assessors' Department.....	92	04
City Debt.....	30,100	00
City Treasurer's Department.....	4	90
Commons Department.....	201	00
Elections.....	17	84
Engineering Department.....	9,108	36
Health Department.....	59	80
Incidentals.....	5	60
Law Department.....	12	00
Library Department.....	6	14
Mayor's Department.....	42	69
Military Aid Department.....	25	00
Pauper Department, Almshouse....	12,821	51
Pauper Department, Out Door Relief.....	10	90
Paving Gorham Street.....	521	36
Paving Chelmsford Street.....	12	00
Widening Andover Street.....	10	50
State Aid, "War with Spain,".....	66	75
Police Department.....	2,419	80
Public Buildings Department.....	2,807	98
School Department.....	30	
School House Department.....	4,033	68
Addition to Varnum School House	1,130	00
Sewer Department.....	660	38
Soldiers' Relief Department....	34	00
State Aid Department.....	106	50
Street Department....	9,194	68
Extension of Aiken Street.....	21	00
Supply Department.....	125	00
Water Works Department.....	194,291	30
Watering Streets Department. ...	815	22
	<hr/>	\$ 3,566,632 46

EXPENDITURES.

The whole amount expended and
ordered to be paid from the City
Treasury from Jan. 1, to Dec.
31, 1898, was.....

\$ 3,337,370 91

The expenditures are charged to the following appropriations or accounts:

Abatement of Taxes.....	\$	206	47
Assessors' Department.....		20,823	73
Auditor's Department.....		3,415	16
City Cemeteries Department.....		8,459	13
City Clerk's Department.....		5,135	59
City Debt.....		304,700	00
Care of City Hall Department.....		7,706	54
City Messenger's Department.....		1,651	43
City Sealer's Department.....		382	84
City Treasurer's Department.....		9,376	94
City Weigher and Measurer's Department.....		800	00
Commons Department.....		13,107	65
Elections.....		10,891	41
Engineering Department.....		16,482	49
Fire Department.....		119,369	54
Grade Crossings.....		1,794	69
Health Department.....		41,026	78
Heating City Hall and Memorial Building Department.....		6,067	98
Huntington Hall Department.....		1,658	26
Huntington Hall, Re-Building.....		4,878	50
Incidentals.....		7,526	26
Interest.....		119,144	78
Inspection of Animals and Provisions.....		500	00
Inspection of Milk, Vinegar, Etc...		1,927	88
Insurance.....		1,425	00
Law Department.....		7,347	93
Library Department.....		15,065	34
Lighting Department.....		87,968	40
Liquor Licenses.....		39,238	50
Mayor's Department.....		4,691	70
Lowell and Tyngsborough Highway		2,543	41
Military Aid Department.....		6,525	00
Pauper Department, Almshouse....		56,853	53
Panper Department, Out Door Relief.....		52,026	89
Paving Chelmsford Street.....		6,013	07
Paving Aiken Street.....		2,084	50
Paving Gorham Street.....		21,572	20
Paving Westford Street.....		7	00
Police Department.....		122,637	94
Publc Buildings Department.....		15,336	33
<i>Amount carried forward.....</i>		<u>\$1,148,370</u>	<u>79</u>

<i>Amount brought forward</i>	\$1,148,370 79
School Department.....	273,458 77
School House Department.....	62,629 95
Bartlett School House.....	1,037 88
Carter Street School House.....	517 11
Additions to Plain Street School House	155 22
Lowell Textile School.....	5,000 00
Addition to Varnum School House.....	29,882 02
Moody Street School House.....	14,710 18
Rifle Range.....	679 32
Sewer Department, Maintenance...	15,897 75
Sewer Construction	104,988 69
Street Department.....	150,475 74
Widening Andover Street.....	19,314 74
Extension of Aiken Street.....	9,972 71
Extension of Beech Street.....	1,187 43
Extension of Lundberg Street.....	4,124 85
Bicycle Path, Bridge Street.....	849 05
Watering Streets.....	9,733 90
Soldiers' Relief Department.....	8,210 23
State Aid.....	14,813 00
State Aid, "War With Spain,"....	1,889 75
State Aid, Office Expenses.....	1,696 98
Supply Department.....	5,337 47
Sinking Fund for City Hall and Memorial Building	7,500 00
Sinking Fund for Extension of Fort Hill Park.....	6,000 00
Sinking Fund for Intercepting Sewer	5,000 00
Sinking Fund for High School.....	3,000 00
Sinking Fund for New School Houses	4,000 00
Sinking Fund for High Service Water Supply.....	1,800 00
Sinking Fund for Water Works....	16,000 00
Temporary Loans.....	1,075,000 00
Corporation Tax.....	26 56
Corporation Tax Fund.....	7,173 33
County Tax.....	65,861 96
National Bank Tax.....	17,335 86
State Tax.....	44,634 29
Soldiers' and Sailors' Tablets in Memorial Hall.....	1,186 38
Water Works.....	197,469 00
Observance of Labor Day.....	400 00
Refunded License Fees.....	50 00
	<hr/>
	\$ 3,337,370 91

The balance in the Treasury Jan. 1, 1898, was.....	\$ 3,087 72	
The amount received into the Treasury during the year 1898, was	3,566,632 46	
	<hr/>	
Making a total of.....	\$ 3,569,720 18	
The amount ordered to be paid from the Treasury during the year 1898, was.....	\$ 3,337,370 91	
	<hr/>	
The balance in the Treasury Dec. 31, 1898, was.....		\$ 232,349 27
		<hr/>

CITY DEBT.

Ordinary City Debt Jan. 1, 1898...	\$ 2,485,350 29	
Borrowed during the year 1898....	409,300 00	
	<hr/>	
Total.....	\$ 2,894,650 29	
Paid during the year 1898.....	274,600 00	
	<hr/>	
Total Ordinary City Debt Dec. 31, 1898.....		\$ 2,620,050 29
Amount of Water Debt Jan 1, 1898.	\$ 1,290,000 00	
Paid during the year 1898.....	30,100 00	
	<hr/>	
Total Water Debt Dec. 31, 1898...		\$ 1,259,900 00
		<hr/>
Total City Debt Dec. 31, 1898.....		\$ 3,879,950 29
		<hr/>
Ordinary City Debt Dec. 31, 1898..	\$ 2,620,050 29	
Sinking Funds for the payment of the same Dec. 31, 1898.....	259,953 81	
	<hr/>	
Net Ordinary City Debt Dec. 31, 1898.....		\$ 2,360,096 48
Water Debt Dec. 31, 1898.....	\$ 1,259,900 00	
Sinking Funds for the payment of the same Dec. 31, 1898.....	246,916 45	
	<hr/>	
Net Water Debt Dec. 31, 1898.....		1,012,983 55
		<hr/>
Total Net Debt Dec. 31, 1898.....		\$ 3,373,080 03
		<hr/>

Total Net Debt of the City Dec. 31, 1898.....	\$ 3,373,080 03	
Total Net Debt of the City Dec. 31, 1897	3,328,778 11	
	<hr/>	
Increase in the Net City Debt during the year 1898.....		<u>44,301 92</u>
Due on Temporary Loans Dec. 31, 1898.....	\$ 425,000 00	
	<hr/>	\$ <u>425,000 00</u>

LIMIT OF INDEBTEDNESS FOR 1899.

Total Debt of the City Jan. 1, 1899.		\$ 3,879,950 29
Deduct Water Loans.....	\$ 1,259,900 00	
Deduct amount exempted by Legis- lature	800,000 00	
Deduct Sinking Funds.....	133,277 45	
	<hr/>	\$ <u>2,193,177 45</u>
City Debt as it relates to limit of in- debtedness.....		\$ <u>1,686,772 84</u>
Limit of Indebtedness for 1899....	\$ 1,754,143 17	
City Debt which applies to limit....	1,686,772 84	
	<hr/>	
Distance from limit Jan. 1, 1899...		\$ <u>67,370 33</u>

LOANS, 1898.

Annual Appropriations.....	\$ 200,000 00	
Widening Andover Street.....	35,000 00	
Extension of Lundberg Street.....	25,000 00	
Sewer Construction.....	30,000 00	
Extension of Aiken Street to Merri- mack Street.....	30,100 00	
Huntington Hall Re-Building.....	36,000 00	
State Aid, "War With Spain,"....	5,200 00	
Sundry Appropriations.....	48,000 00	
	<hr/>	\$ <u>409,300 00</u>

APPROPRIATIONS, 1898.

	Original.	Additional.
Abatement of Taxes.....	\$ 28,492 25	
Assessors.....		\$ 20,757 14
Auditor.....	3,500 00	8 00
City Cemeteries.....	8,500 00	6,480 46
City Clerk.....	5,200 00	59 28
City Debt.....	274,600 00	
Care of City Hall.....	7,200 00	506 82
City Messenger.....	2,000 00	30 25
City Sealer.....	400 00	
City Treasurer.....	9,515 31	12 38
City Weigher and Measurer.....	800 00	
Commons.....	10,000 00	3,220 81
Elections.....	11,500 00	1,638 82
Engineering.....	8,000 00	13 04
Fire.....	119,000 00	1,003 44
Health.....	34,000 00	7,494 74
Heating City Hall and Memorial Building.....	5,500 00	726 84
Huntington Hall.....	2,500 00	158 08
Huntington Hall, Re-Building.....		36,000 00
Incidentals.....	11,000 00	
Insurance.....		3,250 00
Interest.....	115,000 00	1,341 89
Inspection of Animals and Provisions.....	500 00	
Inspection of Milk, Vinegar, Etc....	1,923 00	5 62
Law.....	7,619 73	248 80
Library.....	15,000 00	183 92
Lighting.....	83,000 00	5,077 73
Liquor Licenses.....	38,339 00	899 50
Lowell and Tyngsborough Highway	2,543 41	
Mayor.....	5,000 00	51 07
Military Aid.....	7,300 00	
Pauper Department, Almshouse....	45,000 00	2,151 34
Pauper Department, Out Door Relief.....	35,000 00	17,055 83
Paving Gorham Street.....	15,500 00	5,800 00
Paving Chelmsford Street.....	9,000 00	
Paving Aiken Street.....	13,000 00	
Paving Westford Street.....		11,000 00
Extension of Beech Street.....		5968,87
Widening Andover Street.....		35,000 00
Extension of Lundberg Street.....		25,000 00
Extension of Aiken Street to Merri- mack Street.....		30,100 00
Amount carried forward.....	\$ 935,432 70	\$ 221,244 67

<i>Amount brought forward</i>	\$ 935,432 70	\$ 221,244 67
Bicycle Path on Bridge Street.....		925 00
Streets.....	130,000 00	11,287 47
Sewer Maintenance.....	14,000 00	1,426 29
Sewer Construction	75,000 00	30,000 00
Watering Streets.....	9,000 00	
Police	120,000 00	468 31
Public Buildings.....	12,500 00	62 96
Schools.....	278,000 00	2,870 83
School House.....	35,000 00	23,733 57
Addition to Varnum School.....		14,000 00
Moody Street School House.....		2,200 00
Lowell Textile School		5,000 00
Rifle Range.....	675 00	22 63
Supply	5,200 00	14 13
Soldiers' Relief.....	9,000 00	84 07
State Aid.....	15,000 00	
State Aid, "War With Spain,"....		5,200 00
State Aid Office Expenses.....	1,725 00	
Soldiers' and Sailors' Tablets in Memorial Hall.....	500 00	1,700 00
Observance of Labor Day.....		400 00
Refunded License Fees.....		50 00
Corporation Tax Fund.....		10,000 00
County Tax.....	65,861 96	
National Bank Tax.....	17,161 06	
State Tax.....	44,634 29	
Temporary Loans.....		1,250,000 00
Sinking Funds.....	43,300 00	
	<hr/>	<hr/>
	\$1,811,990 01	\$ 1,580,689 93

APPROPRIATIONS AND EXPENDITURES.

THE AMOUNT OF THE UNEXPENDED BALANCE OF 1897—THE AMOUNT OF THE SEVERAL APPROPRIATIONS MADE BY THE CITY COUNCIL DURING THE YEAR—THE AMOUNT RECEIVED INTO THE TREASURY FROM ALL SOURCES—THE EXPENDITURES IN DETAIL, UNDER EACH APPROPRIATION, AND THE UNDRAWN BALANCES DECEMBER 31, 1898 — ALSO, THE AMOUNT OF THE CITY DEBT—DEBTS DUE THE CITY—SCHEDULES OF THE VALUE OF REAL AND PERSONAL PROPERTY, ETC.

ABATEMENT OF TAXES.

Balance undrawn Jan. 1, 1898.....	\$34,207 01	
Overlays assessed in 1898.....	28,492 25	
	<u> </u>	\$ 62,699 26

EXPENDITURES.

Paid Sundry Persons, abatements after payments.....	\$206 47	
	<u> </u>	\$ 206 47

ABATED BY ASSESSORS BEFORE PAYMENT.

Sundry Persons, on Tax of 1893...	\$13,971 00	
Sundry Persons, on Tax of 1895...	2 00	
Sundry Persons, on Tax of 1896...	408 38	
Sundry Persons, on Tax of 1897...	1,221 45	
Sundry Persons, on Tax of 1898...	4,141 74	
	<u> </u>	\$ 19,744 57
		<u> </u>
		\$ 19,951 04
Balance undrawn Dec. 31, 1898....		42,748 22
		<u> </u>
		\$ 62,699 26

ASSESSORS' DEPARTMENT.

Appropriated from General Treasury Fund.....	\$	20,757 14	
		<u> </u>	\$ 20,757 14
Received from Appropriation for Incidentals, for services of Stephen J. Kirby.....	\$	92 04	
		<u> </u>	\$ 92 04
			<u> </u>
			<u>\$ 20,849 18</u>

EXPENDITURES.

Paid SALARIES:

To Principal Assessors:

Abel Wheeler.....	\$	2,250 00	
Nathan D. Pratt.....		2,250 00	
John P. Mahoney.....		2,250 00	
		<u> </u>	\$ 6,750 00

Assistant Assessors:

C. Arthur Abbott.....	\$	1,200 00	
Avila Bourbonnierre.....		1,200 00	
Frank B. Hawes.....		1,200 00	
George A. Locke.....		1,200 00	
Robert L. Read.....		1,200 00	
Henry Hoole.....		1,200 00	
		<u> </u>	\$ 7,200 00

<i>Amount carried forward.....</i>	\$		<u>13,950 00</u>
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Amount brought forward..... \$ 13,950 00

Paid for services of CLERKS AND
INTERPRETERS :

To Stephen J. Kirby.	\$ 1,626 04	
William J. Reardon.....	1,219 53	
John F. Burrill.....	720 00	
John J. Devine.....	90 00	
James S. O'Sullivan.....	720 00	
James T. Dunphy.....	288 75	
George E. Owen.....	275 00	
Frank B. Peabody.....	260 00	
John T. Donehue.....	242 50	
George E. Caisse.. ..	75 00	
Samuel A. McPhetres.....	77 50	
Eugene Meyrand.....	56 25	
John F. Egan.....	76 25	
Enoch Gerrish.....	5 00	
John Bettencourt.....	2 50	
Ernest L. Bourbonnierre.....	19 50	
Michael Iatros.....	72 50	
Francis J. Leblanc.....	2 50	
Martin H. Garro.....	30 00	
	<hr/>	\$ 5,858 82

Paid for SUNDRIES :

To Abel Wheeler, for expenses to Boston on Tax Cases.....	\$ 9 00	
Stephen J. Kirby, for stamps.	4 00	
John F. Burrill, for expenses to Cambridge	4 00	
N. E. Tel. & Tel. Co., for ser- vice	47 28	
V. G. Barnard, for postage stamps... ..	22 00	
Banker and Tradesman, for subscription	5 00	
F. U. Cambridge, for stationery	1 50	
Courier-Citizen Co., for printing	4 75	
Dumas & Co., for blank books.	164 60	
Thomas H. Lawler, for station- ery	11 00	
G. C. Prince & Son, for station- ery	13 10	
Thompson & Hill for precinct books.....	552 96	
Tilton & Company, for station- ery	8 63	
	<hr/>	
<i>Amount carried forward</i>	\$ 847 82	\$ 19,808 82

<i>Amount brought forward</i>	\$	847, 82	\$	19,808 83
To Union Printing Co., for printing		1 40		
M. G. Wight & Co., for blank books and stationery.....		130 25		
W. H. Boody, for posting.....		6 00		
Hutchins Rubber Type Foundry for stamp.		1 25		
Little, Brown & Co., for copy Mass. Statutes.....		4 25		
Lowell Rubber Co., for rubber bands.....		3 00		
Sampson, Murdock & Co., for directories		12 00		
Am. Ex. Co., for transportation		1 80		1,007 77
Total expenditure for the year 1898.			\$	20,816 59

1897 BILLS.

To N. E. Tel. & Teleg. Co., for services	\$	3 94		
Tilton & Company, for stationery		3 20		
			\$	7 14
			\$	20,823 73
Balance to General Treasury Fund.				25 45
			\$	20,849 18

AUDITOR'S DEPARTMENT.

Annual Appropriation	\$	3,500 00	
Additional Appropriation.....		\$8 00	
		<hr/>	\$ 3,508 00

EXPENDITURES.

Paid for SUNDRIES :

To David Chase, Auditor, salary...	\$	1,800 00
David Chase, for rent of P. O. box, etc.....		5 00
Thomas P. Sullivan, Clerk....		1,219 53
V. G. Barnard, for postage stamps.....		7 00
Frank A. Brown, for printing..		1 75
Courier-Citizen Co., for printing and advertising.....		50 90
Daily News Job Print, for printing.....		26 45
Lowell Sun, for printing and advertising.....		5 90
Morning Mail Corp., for adver- tising		1 08
Union Printing Co., for print- ing		4 90
Vox Populi Press, for printing 1200 Auditor's Reports....		189 00
M. G. Wight & Co., for paper and printing.....		7 50
		<hr/>
<i>Amount carried forward.....</i>	\$	3,319 01

<i>Amount brought forward</i>	\$	3,319 01	
To Dumas & Co. for blank books, and paper.....		64 00	
C. F. Hatch & Co., for en- velopes.....		5 50	
Thomas H. Lawler, for station- ery		3 60	
Lowell Rubber Co., for bands..		1 35	
Lyon Platinum Pen Co., for pens.....		3 75	
G. C. Prince & Son, for station- ery		2 45	
Sampson, Murdock & Co, for directory.....		2 00	
J. H. Sparks, for carriage hire..		4 00	
G. E. Stanley, for teaming.....		1 50	
Total expenditure for the year 1898	\$		3,407 16

1897 BILLS.

Paid Courler-Citizen Co., for print- ing in 1897.....		8 00	
	\$	3,415 16	
Balance to General Treasury Fund.		92 84	
	\$	3,508 00	

CARE OF CITY HALL.

Annual Appropriations.....	\$	7,200	00
Additional Appropriations		506	82
		<hr/>	
	\$		<u>7,706 82</u>

EXPENDITURES.

Paid for SUNDRIES :

To Appropriations for Commons, for labor and material....	\$	53	00
Appropriations for Police, for services of officer.....		1,003	75
Appropriations for Public Build- ings, for labor and material		70	70
Appropriations for Water Works, for water.....		79	86
Sundry persons for labor.....		4,963	82
Wm. H. Wiggin, for labor and use of lumber		35	00
Charles E. Adams, for hardware		70	
W. T. S. Bartlett, for mop handles and scoop.....		90	
Bartlett & Dow, for hardware.		23	50
J. C. Bennett, for hardware, etc.		7	80
Thompson Hardware Co., for tools		1	25
H. R. Barker Mfg. Co., for valves, labor, etc.		30	99
		<hr/>	
<i>Amount carried forward.....</i>	\$	6,271	27

<i>Amount brought forward</i>	\$	6,271 27
To E. J. Carroll, for pipe, fittings and labor.....		7 87
Drury & Green, for slop hop- pers, fittings and labor...		152 62
Charles E. Gee, for repairing lawn mower.....		2 15
Farrell & Conaton, for pipe, fittings and labor.....		6 20
Joel Knapp & Son, for repair- ing lawn mower.....		1 25
Charles F. Morse, for lamps...		14 25
Rice & Company, for wire guards.....		35 35
J. M. Shaw, for force pump...		1 50
Tucke & Parker, for shades, lamps, labor, etc.....		199 61
Weir Electric Co., for repairs..		82 47
H. H. Wilder & Co., for fittings, labor, etc		17 10
Buttrick & Co., for soap.....		50
C. B. Coburn & Co., for glass, oil, pails, soapine, etc.....		27 34
Walter Coburn & Co., for waste		2 25
Eagle Oil and Supply Co., for solarine		11 25
Daniel Gage, for ice.....		49 15
Frank B. Hough, for polish....		5 25
India Alkali Works, for sava- gran		11 64
Arthur S Manning, for polish..		3 00
Perless Powder Co., for powder		13 56
Providence Sizing Co., for soap		8 72
Caleb L. Smith, for soap.....		80
M. E. Thompson, for soap, combs, and brushes.....		13 00
S. M. Stevens, for fire extin- guishers		36 00
P. P. Stiles & Co., for matches.		60
S. Abels, for towels.....		13 25
Boston Feather Duster Co....		5 40
Patrick Brady, for reseating chairs.....		2 25
John G. Brown, for mop wring- ers.....		4 00
John Cross, for rope and repair- ing flags.....		9 25
<i>Amount carried forward</i>	\$	7,008 85

<i>Amount brought forward</i>	\$	7,008 85	
To Derby Desk Co., for desks.....		55 00	
Gardner Bros., for repairing chairs		5 00	
E. F. Hathaway, for signs.....		22 40	
A. L. Kittredge & Co., for dusters and roller.....		5 70	
Alvin Lawrence for care and re- pair of clocks.....		52 00	
Lowell Steam Carpet Cleaning Works, for cleaning carpets		15 10	
Marshall & Crosby, for ward- robe and repairing furni- ture.....		33 05	
Murphy, Leavens & Co., for brushes.....		9 68	
O'Donnell & Gilbride Co., for furniture, etc.....		196 79	
A. G. Pollard & Co., for cloth..		1 75	
G. C. Prince & Son, for toilet paper.....		12 00	
D. Moody Prescott, for mason work and material.....		123 00	
Joseph Peabody, Agt., for in- surance		57 31	
American Express Co., for transportation		15	
N. Y. & B. Des. Ex. Co., for transportation		45	
G. E. Stanley, for teaming.....		1 49	
<hr/>			
Total expenditure for the year 1898	\$		7,599 72

1897 BILLS.

Paid for SUNDRIES:

To Appropriation for Police, for ser- vices of officer	\$	85 25	
Appropriation for Water Works, for water		12 60	
Bartlett & Dow, for shovel....		35	
Daniel Gage, for ice		7 72	
<hr/>			
<i>Amounts carried forward</i>	\$	105 92	\$ 7,599 72

<i>Amounts brought forward</i>	\$	105 92	\$	7,599 72
Thompson Hardware Co., for hardware.....		90	\$	106 82
			\$	7,706 54
Balance to General Treasury Fund.				28
			\$	7,706 82

CARNEY MEDAL FUND.

Balance undrawn Dec. 31, 1898....	\$	200 00	
		<u> </u>	\$ 200 00
			<u> </u>

CITY CEMETERIES.

Annual Appropriation.....	\$	8,500 00
Additional Appropriation		6,480 46
		\$ 14,980 46

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for services.....		12 00
Appropriation for police, for services of officers.....		2 75
Appropriation for Water Works for pipe and labor.....		18 01
Appropriation for Water Works for water.....		41 01
Sundry persons, for labor.....		5,750 70
Wm. W. Clark, for lease of land and stable....		140 00
V. G. Barnard, for postage stamps.....		14 00
N. E. Tel. & Teleg. Co., for service		53 58
Burnham & Davis, for lumber..		31 22
Wm. H. Wiggin, for lumber...		73 62
Chas. E. Adams, for hardware.		9 73
W. T. S. Bartlett, for hard- ware		6 50
Bartlett & Dow, for hardware, window screens, tools, etc.		94 59
<i>Amount carried forward.....</i>	<i>\$</i>	<i>6,247 71</i>

<i>Amount brought forward</i>	\$	6,247 71
To T. Costello & Co., for pipe and fittings		3 06
C. Clough, for filing saws.....		1 85
Charles E. Gee, for repairing lawn mowers.....		5 40
Pevey Bros., for castings.....		6 95
Rice & Company, for wire netting.....		2 44
H. H. Wilder & Co., for cash box		88
C. B. Coburn & Co., for brooms, paint, etc.....	15	10
A. L. Kittredge & Co., for asphaltum	2	40
Caleb L. Smith, for mop handle, pearline and soap.....	1	75
Courier-Citizen Co., for bill book	5	25
Daily News Job Print, for printing.....	2	90
Hutchins Rubber Type Foundry for stamp.....		20
Thomas H. Lawler, for stationery	4	69
J. Merrill & Son, for stationery.	2	50
G. C. Prince & Son, for books, stationery, etc.....	8	39
Tilton & Co., for stationery....	2	01
Union Printing Co., for printing	2	00
Vox Populi Press, for printing.	1	75
D. W. Horne & Son, for coal...	27	32
E. A. Wilson & Co., for cement	4	65
E. Bibault, for loam.....	119	00
W. A. Dickinson, for loam....	36	00
R. Wilson Dix, for loam.....	645	00
C. W. Parsons for loam.....	34	00
Harvey B. Greene, for plants...	196	00
H. W. Tarbell, for trees.....	125	00
Owen Lowney, for gravel.....	25	70
Wm. H. Shedd, for sod.....	343	37
Staples Bros., for catch basin and drain.....	40	00
George F. Allen, for repairing harness.....	7	25
<i>Amount carried forward</i>	\$	7,920 52

<i>Amount brought forward</i>	\$	7,920 52	
To H. F. Ebert, for repairing harness		2 40	
Charles F. Kappler, for blacksmithing		50 15	
J. B. Cover & Co., for hay and grain		166 05	
C. H. Hanson & Co., for hay, straw, and grain.....		31 21	
W. E. Livingston for oats and salt.....		19 13	
E. N. Wood & Co., for oats....		18 04	
E. A. and A. T. Smith, for concrete		21 17	
<hr/>			
Total Expenditure for the year 1898.....	\$		8,228 67

1897 BILLS.

Paid for SUNDRIES :

To Appropriation, for Water Works, for water.....	\$	4 03	
N. E. Tel. and Teleg. Co., for service.....		4 59	
Wm. W. Clark, for expenses...		36 15	
Thomas S. Edmunds, for sod..		93 00	
Thomas H. Lawler, for stationery.....		2 40	
A. G. Stiles & Co., for grain...		18 79	
H. W. Tarbell, for plants and bulbs		71 50	
<hr/>			
	\$		230 46
<hr/>			
	\$		8,459 13
Balance to General Treasury Fund	\$	271 33	
Balance carried forward.....		6,250 00	6,521 33
<hr/>			
	\$		14,980 46
<hr/>			

CITY CLERK.

Annual Appropriation.....	\$	5,200	00
Additional Appropriation.		59	28
		<hr/>	<hr/>
	\$		5,259 28

EXPENDITURES.

Paid for SUNDRIES :

To Girard P. Dadman, City Clerk,		
salary	\$	1,800 00
Girard P. Dadman, for postage,		
office expenses, etc.		43 72
Wm. P. McCarthy, Assistant		
City Clerk, salary.....		1,219 53
Belle C. Hill, Clerk.....		636 00
Edwards Cheney, Clerk.....		20 00
Arthur F. Salmon.....		12 50
N. E. Tel. & Teleg. Co., for		
service.....		71 26
Ballard & Kirschbaum, for rent		
of telephone index.....		1 00
John Barnes, for printing.....		11 00
W. H. Boody, for posting.....		7 00
Courier-Citizen Co., for printing		
and subscriptions.....		50 75
Dumas & Co., for blank books,		
binding city documents, etc		498 11
B. M. & M. E. Hutchins, for		
typewriting		20 86
		<hr/>
<i>Amount carried forward.....</i>	\$	4,391 73

Amount brought forward..... \$ 4,391 73

To Thomas H. Lawler, for stationery	22 00
Henry M. Meek, for blank books and directory	20 25
Morning Mail Corp., for subscription	6 00
G. C. Prince & Son, for stationery	2 52
Charles E. Robinson, for printing	1 25
Sampson, Murdock & Co., for directories	4 00
J. L. Severance, for stamps	1 65
Smith Premier Typewriter Co., for ribbons	1 50
Tilton & Company, for stationery	1 50
Thompson & Hill, for printing.	2 25
Thorpe & Bailey, for printing..	1 50
F. A. M. Tobin, for printing...	1 40
Union Printing Co., for printing	16 90
Vox Populi Press, for printing.	16 25
M. G. Wight & Co., for stationery	8 50
J. H. Sparks, for carriage hire..	35
Am. Ex. Co., for transportation	5 06
B. & L. Des. Ex. Co., for transportation	40

Reporting Births :

Solon Bartlett.....	8 25
S. B. Bellehumeur.....	4 25
P. Brunelle..	2 25
Deborah Chalmers.....	2 50
J. J. Colton.....	3 50
Catharine Casey.....	50
Mrs. M. A. Dooley.....	14 00
Cornelius A. Daly	19 75
James B. Field.....	4 50
Kate Flannagan.....	50
J. A. Gagnon	6 00
E. Gervais.....	17 75
A. E. Gillard	50
T. G. Halloran.....	25
Lena Hopner.....	2 25
Guy Holbrook.....	7 50

Amount carried forward..... \$ 4,599 26

<i>Amount brought forward</i>	\$	4,599 26
To Thomas F. Harrington.....		1 00
W. A. Johnson.....		1 50
Mary Kenney.....		2 50
A. W. Lavigue.....		4 75
Wm. P. Lawler.....		16 50
Wm. H. Lathrop.....		14 50
J. E. Lamoureaux.....		3 50
Catherine Loftus.....		3 75
A. Lamothe.....		50
Joe V. Meigs, Jr.....		75
Annie M. Call.....		2 75
G. Forrest Martin.....		1 25
J. P. M. Adams.....		6 75
T. G. McGannon.....		5 25
Mary Noel.....		45 25
Lizzie Nudd.....		1 50
J. B. O'Connor.....		4 00
Mary O'Neil.....		25
D. N. Patterson.....		2 75
S. Patenaude.....		9 50
C. Brit Poole.....		1 25
Charles H. Ricker.....		50
Sarah Rockwell.....		25
J. H. Roy.....		23 00
Louis V. Rochette.....		56 75
L. E. Schiller.....		6 00
Catherine Shanley.....		6 50
Thomas B. Smith.....		3 75
Charles B. Saunders.....		25
James F. Sullivan.....		9 00
Margaret Sweeney.....		11 50
Charles L. Sweetser.....		7 25
C. W. Taylor.....		1 50
E. W. Trueworthy.....		3 00
W. H. Vinall.....		75
J. E. Varney.....		1 25
T. G. Waller.....		3 50
Margaret Wilson.....		75
G. L. Van Dusen.....		75
J. B. Wentworth.....		75
Geo. E. Caisse.....		26 50
F. P. Coggeshall.....		25 50
Frank W. S. Daly.....		12 90
Fred N. Edgell.....		16 90
Matthaw H. Gilroy.....		30 00
John A. Herrick.....		18 20
<i>Amount carried forward</i>	\$	4,996 01

<i>Amount brought forward</i>	\$	4,996 01	
To Eugene Meyrand.....		38 50	
Morton N. Peabody.....		25 90	
Arthur F. Salmon.....		15 90	
		<hr/>	
Total expenditure for the year 1878.	\$		5,076 31

1897 BILLS.

Paid for SUNDRIES :

To Am. Express Co., for transportation	15
Courier-Citizen Co., for printing	4 00
Girard P. Dadman, for postage	9 00
Lowell Daily News, for advertising	3 00
Morning Mail Corp., for subscription	6 00
N. N. Tel. & Teleg. Co., for service	5 63
Vox Populi Press, for printing	2 75

Reporting births :

Cornelius A. Daly.....	4 25
James B. Field	50
Guy Holbrook.....	1 75
Wm. A. Johnson.....	25
Wm. H. Lathrop.....	3 25
Wm. P. Lawler.....	1 75
A. W. Lavigne	1 50
J. V. Meigs.....	25
Mary Noel.....	5 75
James B. O'Connor.....	2 50
Louis V. Rochette.....	4 50
Thomas B. Smith.....	50
James F. Sullivan.....	1 25
Charles L. Sweetsir.....	75

\$ 59 28

Balance to General Treasury Fund.

\$ 5,135 59

123 69

\$ 5,259 28

CITY DEBT.

Annual Appropriation.....	\$	274,600 00	
		<u> </u>	\$ 274,600 00
Received from Appropriation from Water Works, instalments on notes.....	\$	30,100 00	
		<u> </u>	\$ 30,100 00
			<u> </u>
			<u>\$ 304,700 00</u>

EXPENDITURES.

Paid on account of WATER
DEBT:

To Sundry Persons.....	\$	5,000 00	
Lowell Institution for Savings..		25,100 00	
		<u> </u>	\$ 30,100 00

Paid on account of ORDINARY
CITY DEBT:

Blake Bros. & Co.....	\$	22,000 00
Susan B. Cabot.....		20,000 00
Central Savings Bank.....		14,000 00
Essex Savings Bank.....		5,400 00
Lee, Higginson & Co.....		15,500 00
Lowell Institution for Savings.		145,800 00
National Bank of Redemption.		7,500 00
New England Life Insurance Co.....		1,900 00
		<u> </u>

<i>Amounts carried forward.....</i>	\$232,100 00	\$	30,100 00
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<i>Amount brought forward</i>	\$ 232,100 00	\$ 30,100 00
To E. H. Rollins & Son.....	10,000 00	
Salem Five Cent Savings Bank	5,000 00	
Seamen's Bank for Savings,		
New York.....	17,500 00	
Sundry Persons.....	10,000 00	
	<hr/>	\$ 274,600 00
Total Expenditure for the year		
1898.....		<hr/> <hr/> \$ 304,700 00

CITY MESSENGER.

Annual Appropriation.....	\$	2,000	00	
Additional Appropriation.....			30 25	
				\$ 2,030 25

EXPENDITURES.

Paid for SUNDRIES :

To Charles F. Going, City Messenger, salary.....	\$	1,200	00	
Charles R. Preston, for services at City election.....			5 00	
N. E. Tel. & Teleg. Co., for service.....			74 73	
V. G. Barnard, for postage stamps.			23 00	
Ballard & Kirschbaum, for rent of telephone index.....			1 00	
John Barnes, for printing.....			3 25	
F. S. Blanchard & Co., for Mass. Year Book.....			1 50	
Butterfield Printing Co., for printing			1 25	
Butterfield Printing and Binding Co., for printing.....			1 25	
Courier-Citizen Co., for printing		10	00	
Dumas & Co., for lettering books.....			95	
George F. King & Co., for pencils.....			4 50	
<i>Amount carried forward.....</i>	\$	1,326	43	

<i>Amount brought forward</i>	\$	1,326 43	
To Thomas H. Lawler for postage stamps and printing.....		65 00	
G. C. Prince & Son, for stationery		2 75	
Sampson, Murdock & Co., for directories		13 00	
F. A. M. Tobin, for printing...		11 95	
Vox Populi Press, for printing.		1 25	
A. G. Pollard & Co., for ribbon.		3 75	
Whittet & Co., for flowers ...		9 00	
J. H. Sparks, for carriage hire..		155 70	
Am. Ex. Co., for transportations		1 10	
B. & M. R. R., for tickets.....		31 25	
		<hr/>	
Total expenditure for the year 1898.	\$		1,621 18

1897 BILLS.

Paid for SUNDRIES :

To Morning Mail Co., for printing..	\$	3 25	
G. C. Prince & Son, for subscriptions		15 00	
J. H. Sparks, carriage hire.....		12 00	
		<hr/>	
		\$	30 25
		<hr/>	
		\$	1,651 43
Balance to General Treasury Fund.			378 82
		<hr/>	
		\$	2,030 25
		<hr/>	
		<hr/>	

CITY SEALER.

Annual Appropriation.....	\$	400 00	
		<u> </u>	\$ <u>400 00</u>

EXPENDITURES.

Paid for SUNDRIES :

To Nathaniel E. Annis, salary.....	\$	300 00	
W. H. Boody, for posting notices.....		5 00	
Lowell Bill Posting Co., for posting notices.....		7 50	
Thomas H. Lawler, for blank book		1 34	
Vox Populi Press, for printing.		4 00	
E. E. Maynard, for teaming...		65 00	
		<u> </u>	
Total expenditure for the year 1898.	\$		382 84
Balance to General Treasury Fund..			17 16
			<u> </u>
	\$		<u>400 00</u>

CITY TREASURER.

Annual Appropriation.....	\$	9,515 31	
Additional Appropriation.....		12 38	
		<hr/>	\$ 9,527 69

RECEIPTS.

Received from Appropriation for Incidentals, for railroad ticket.....	\$	4 60	
Appropriation for Sol- diers' Relief, for use of telephone.....		30	
		<hr/>	\$ 4 90
			<hr/>
			\$ 9,532 59

EXPENDITURES.

Paid Charles F. Coburn, City Treasurer, salary.....	\$	2,700 00	
		<hr/>	\$ 2,700 00
Paid for SERVICES of CLERKS :			
To Andrew G. Stiles.....	\$	1,524 81	
Joseph Farrell.....		1,219 53	
		<hr/>	
<i>Amounts carried forward.....</i>	\$	2,744 34	\$ 2,700 00

<i>Amounts brought forward</i>	\$	2,744 34	\$	2,700 00
To Charles C. Wilson.....		125 00		
Florence Gilmore.....		636 60		
Margaret MacDonald.....		530 00		
		<hr/>	\$	4,035 34

Paid for SUNDRIES :

To Charles F. Coburn, for postage, recording deeds, etc.....	448 75
Thomas J. Johnson, for services as witness.....	10 00
N. E. Tel. and Teleg. Co., for service.....	83 31
Appropriations for Public Buildings, for labor and material	2 63
B. & M. R. R. Tickets, for mile- age ticket.....	20 00
Boston News Bureau, for sub- scription	12 00
Banker and Tradesman, for subscription	5 00
John Barnes, for printing.....	1 98
J. E. Buerk, for dials.....	1 80
T. S. Buck, for stamps.....	7 75
Courier-Citizen Co., for print- ing	5 50
Dumas & Co., for blank books..	69 75
Enterprise Printing and Stamp Works, for printing.....	75
E. F. Hathaway, for printing signs	1 80
Hutchins Rubber Type Foundry Co., for stamp.....	40
Thomas H. Lawler, for blank books, stationery, etc.....	29 15
Lowell Daily Sun, for printing.	
Lowell Rubber Co., for rubber bands.....	18 00
	1 35
Lowell & Suburban Street Rail- way Co., for tickets.....	2 00
Morning Mail Co., for printing	115 33
G. C. Prince & Son, for ribbon and stationery.....	45 10
Sampson, Murdock & Co., for directories.....	4 00

<i>Amounts carried forward</i>	\$	886 35	\$	6,735 34
--------------------------------------	----	--------	----	----------

Amounts brought forward..... \$ 886 35 \$ 6,735 34

To Spencer & Co., for printing card.....	1 00	
Tilton & Co., for stationery....	4 25	
Thorpe & Bailey, for printing.	5 00	
Vox Populi Press, for printing	18 25	
M. G. Wight & Co., for blank books and stationery.....	64 00	
Mds'x Registry of Deeds, for recording.....	10 00	
E. M. Tucke, for clerk's insurance.....	125 00	
C. B. Coburn & Co., for feather duster	1 35	
C. Zimmer, for keys and fitting	75	
D. P. Knowlton for teaming...	50	
J. H. Sparks, for carriage hire.	13 40	
	<hr/>	\$ 1,129 85

Paid on account of Taxes :

To Courier-Citizen Co., for printing and advertising.....	\$ 270 22
Daily News Co., for advertising	96 19
Daily News Job Print for printing.....	8 50
Lepine & Co., for printing and advertising	133 55
Lowell Daily Sun, for printing and advertising.....	185 52
Lowell Sunday Press, for advertising.....	10 57
Morning Mail Co., for printing and advertising.....	163 07
John J. Crowley, for services..	2 75
Philip Dwyer, for services....	1 38
E. N. Grinnell, for services...	11 00
Charles Gregg, for services....	5 50
Daniel W. Lane, for services...	2 75
Albert E. Libby, for services...	2 75
Matthew J. McCann, for services.....	2 75
John O'Connell, for services...	2 75
George W. Robinson, for services	1 37
John McManus, for serving warrants	256 00

Amounts carried forward..... 1,156 62 \$ 7,865 19

<i>Amounts brought forward</i>	\$	1,156 62	\$	7,865 19
To Enoch Gerrish, for serving war- rants and services as inter- preter		261 75		
Henry Mercier, far serving war- rants		105 50		
Michael Iatros, services as in- terpreter		20 50		1,499 37
Total expenditure for the year 1898.			\$	9,364 56

1897 BILLS.

Paid for SUNDRIES :

To N. E. Tel. & Teleg. Co., for ser- vice	\$	6 38		
G. C. Prince & Son, for sub- scriptions		6 00		12 38
			\$	9,376 94
Balance to General Treasury Fund.				155 65
			\$	9,532 59

CITY WEAIGHER AND MEASURER.

Annual Appropriation.....	\$	800 00	
		<u> </u>	\$ 800 00
			<u> </u>
Paid George F. Noonan, salary....	\$	800 00	
		<u> </u>	\$ 800 00
			<u> </u>

COMMONS.

Annual Appropriation.....	\$	10,000 00	
Additional Appropriation.....		3,220 81	
		<u> </u>	\$ 13,220 81

RECEIPTS.

From Appropriation for Care of City Hall, for labor and ma- terial	\$	53 00	
Appropriation for Huntington Hall, for labor		112 00	
Appropriation from Public Buildings, for labor and material		36 00	201 00
		<u> </u>	<u> </u>
			\$ 13,421 81
			<u> </u>

EXPENDITURES.

Paid Sundry Persons, for labor..	\$	8,279 57	
		<u> </u>	\$ 8,279 57

Paid for SUNDRIES :

To Appropriation for Health, for horse, medicine and shoeing	\$ 58 00
Appropriation for Mayor's Department, for railroad tickets	1 72
Appropriation for Public Buildings, for labor and material	6 00
Appropriation for Streets, for shoeing horses	15 50
Appropriation for Water Works for water	10 80
John W. W. Tilton, for expenses to Boston	4 00
Burnham & Davis, for lumber.	10 53
Davis & Sargent, for lumber . .	3 76
E. E. Galer, for dipper handles.	2 00
Wm. H. Wiggin, for lumber . .	51 83
Charles E. Adams, for hardware, paint and brushes . .	45 02
W. T. S. Bartlett, for hardware and tools	6 50
Bartlett & Dow, for hardware and tools	63 57
H. B. Shattuck & Son, for shovels and zinc	9 50
Thompson Hardware Co., for hardware and tools	1 78
John Callaghan, for repairing stove	3 64
Charles E. Gee, for repairing lawn mowers	31 70
Joel Knapp & Son, for repairing lawn mowers	19 78
Victor Pihl, for stove	5 00
Rice & Co., for wire guards . .	12 83
C. N. Rice, for filing saws and repairing lock	1 25
Jerry Ryan, for repairing can..	25
Sweeney & Welch, for pipe, naphtha, washers, labor, etc.	67 40
P. F. Welch, for pipe, fittings and labor	17 05
C. B. Coburn & Co., for glass, paint, brushes, acid, etc . .	26 50
Crystal oil Co., for oil	2 70

<i>Amounts carried forward</i>	\$	478 61	\$	8,279 57
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<i>Amounts brought forward</i>	\$	478 61	\$	8,279 57
To Frank Garvey, for condition powders		12 00		
Frank P. Moody for liniment..		90		
Caleb L. Smith, for soap.....		55		
J. H. Sparks, for lotions.....		1 00		
James Blakely, for shoeing horses		5 25		
Cahill Bros., for shoeing horse.		1 00		
Owen J. Carney, for shoeing horses.....		14 75		
C. Crevier, for blacksmithing..		55 25		
A. H. Cluer, for harness and re- pairing		43 15		
Cornelius Desmond, Agt., for shoeing.....		4 50		
John J. Donnelly, for shoeing..		17 20		
H. F. Ebert, for repairing har- nesses.....		6 60		
Q. A. Foster, for shoeing horse		1 75		
C. H. Hanson, for medicine and repairing harnesses.....		8 65		
C. H. Hanson & Co., for whips, blankets, oil, etc.....		9 75		
Joseph Hebert, for repairing harnesses		6 90		
F. B. Hill & Co., for repairing carriages		89 30		
Charles H. Hill, for repairing wagon		1 10		
B. W. Johnson, for black horse		100 00		
Lowell Rubber Co., for horse cover and rubber boots		7 00		
H. C. Moore, for blacksmithing.		3 85		
D. W. Parker, for repairing harnesses		3 10		
G. H. Philbrick, for shoeing horse		75		
Henry Reynolds, for shoeing horses		15 35		
A. L. Warren, for repairing car- riages		19 72		
J. B. Cover & Co., for hay and grain		127 35		
Wm. E. Livingston, for corn and oats.....		55 65		
E. S. Sherman & Co., for salt..		38		
<i>Amounts carried forward</i>	\$	1,091 36	\$	8,279 57

<i>Amounts brought forward</i>	\$	1,091 36	\$	8,279 57
To Vigeant, Dumas & Co., for oats		35 50		
' E. N. Wood & Co., for oats and bran.....		72 46		
Edward Cawley, for pipe and cement		25 07		
Robert E. Crowley, for concrete		44 00		
D. W. Horne & Son, for coal..		5 92		
Harry Raynes, for police badge.		3 00		
Hotel Belvidere, for refreshments		10 00		
Richardson's Hotel, for refreshments		8 00		
Louise J. McLaughlin, for services singing at Flag Raising		3 00		
R. A. Griffiths, for plants.....		7 20		
C. L. Marshall, for plants and bulbs		139 20		
Patten & Roberts, for plants..		5 40		
Maria J. Chase, for repairing flag		1 00		
John Mountford, for repairing rubber boots		1 20		
G. C. Prince & Son, for stationery		1 15		
Charles E. Robinson for stationery		2 00		
Sampson, Murdock & Co., for directory.....		2 00		
Tilton & Company, for stationery		3 53		
Union Printing Co., for printing		1 00		
A. D. Boynton, for manure and teaming.....		36 00		
C. Constantineau, for manure..		4 00		
Henry Reynolds, for manure...		16 00		
John Sullivan, for manure.....		6 00		
J. P. Thompson, for manure...		4 00		
J. H. Walker, for manure.....		16 00		
W. S. Eaton, for professional services		2 00		
A. H. McCann, for professional services		18 00		
P. F. McNulty, for use of horse		15 00		
Morse Coach Co., for carriage hire		3 00		
<i>Amounts carried forward</i>	\$	1,581 99	\$	8,279 57

<i>Amounts brought forward</i>	\$	1,581 99	\$	8,279 57
To J. H. Sparks, for carriage hire,		7 00		
B. G. Brown, for teaming.....		5 00		
Charles Prudhomme, for teaming		16 00		
		<hr/>	\$	1,609 99

Improvement Fort Hill Park:

Paid for SUNDRIES:

To Sundry persons for labor.....	\$	2,510 19		
Appropriation for Engineering.		186 38		
Appropriation for Public Buildings, for labor and material		9 41		
E. E. Galer, for repairing drag.		12 00		
Charles E. Adams, for tools....		2 62		
Bartlett & Dow, for seeds.....		2 55		
C. Crevier, for blacksmithing..		16 55		
Edward Cawley, for drain pipe.		13 16		
C. B. Coburn & Co., for lanterns.....		1 85		
Wm. Nichols & Co., for dualin and fuse.....		7 45		
E. A. Wilson & Co., for brick and cement.....		2 62		
C. H. Hanson & Co., for use of horse		1 50		
A. D. Boynton, for teaming...		59 00		
George B. Fuller, for teaming.		172 00		
		<hr/>	\$	2,997 28
			\$	<hr/> 12,886 84

1897 BILLS.

Paid for SUNDRIES:

To Appropriation for Supply Department, for horse.....	\$	125 00		
Cahill Bros., for shoeing horses.		9 40		
C. Crevier, for shoeing horses..		3 00		
O. K. Dexter, for shoeing horses		2 85		
A. D. Mitten, for shoeing horses.....		5 25		
		<hr/>		
<i>Amounts carried forward</i>	\$	145 50	\$	12,886 84

<i>Amounts brought forward</i>	\$	145 50	\$	12,886 84
To Henry Reynolds, for shoeing horses.....		3 50		
C. N. Rice, for filing saws.....		1 60		
A. L. Warren, for blacksmith- ing		30 21		
Charles Prudhomme, for team- ing		40 00		
		<hr/>	\$	<hr/> 220 81
			\$	13,107 65
Balance to General Treasury Fund.....				314 16
			\$	<hr/> 13,421 81 <hr/>

CORPORATION TAX FUND.

Appropriated from General Treasury Fund	\$ 10,000 00	
	<u> </u>	\$ <u>10,000 00</u>

EXPENDITURES.

Paid for SUNDRIES :

To Francis W. Qua, for sundry expenses	\$ 100 28	
Edward A. Brigham, for services	1,750 00	
John Cumnock, for services....	1,750 00	
James G. Hill, for services....	1,400 00	
A. F. Knight, for services....	1,650 00	
L. K. Taylor, for services.....	180 00	
James T. Dunfey, for clerical services.....	22 50	
F. E. Rollins, for typewriting..	23 30	
C. E. Scribner, for services as draughtsman and expenses.	290 75	
Morse Coach Co., for carriage hire	6 50	
	<u> </u>	
Total expenditure for the year 1898.		\$ 7,173 33
Balance carried forward Dec. 31, 1898.....		2,826 67
		<u> </u>
		\$ <u>10,000 00</u>

ELECTIONS.

Annual Appropriation.....	\$	11,500 00	
Additional Appropriation		1,638 82	
Received from Sundry persons, cash returned to treasury.....		17 84	
		<hr/>	\$ <u>13,156 66</u>

EXPENDITURES.

Paid on account of REGISTRARS OF VOTERS :

To Girard P. Dadman, Registrar..	\$	550 00
Edwards Cheney, Registrar....		550 00
John P. Farley, Registrar.....		550 00
James F. Owens, Registrar....		550 00
John J. Carrigg, Clerk.....		217 50
O. A. Court, clerk.....		6 25
Waldo F. Miles, Clerk.....		58 75
Eugene P. McOsker, Clerk....		18 75
Samuel A. McPhetres, Clerk...		22 50
George E. Owens, Clerk.....		5 00
F. S. Osterhout, Clerk.....		52 50
Frank B. Peabody, Clerk.....		85 00
Edward S. Redmond, Clerk...		32 50
Arthur F. Salmon, Clerk.....		42 50
James A. Sullivan, Clerk.....		52 50
Girard P. Dadman, for stamps..		10 26
W. H. Boody, for posting.....		10 00
		<hr/>
<i>Amount carried forward.....</i>	\$	2,814 01

<i>Amount brought forward</i>	\$	2,814 01	
To Courier-Citizen Co., for printing		16 75	
Daily News Job Print, for printing		1 90	
Dumas & Co., for blank books, printing and binding		65 00	
Lowell Sun, for printing.....		42 60	
Morning Mail Co., for printing.		15 00	
Sampson, Murdock & Co., for directories		4 00	
Thompson & Hill, for printing.		639 70	
M. G. Wight & Co., for printing		40	
W. H. Spaulding, for labor on check lists.....		4 50	
James P. Donohue & Co., for refreshments		11 65	
D. L. Page Co., for refreshments		5 87	
		<hr/>	\$ 3,621 38

Paid on account of ELECTIONS:

To Appropriation for Public Buildings, for labor and material on polling booths.....	\$	547 08	
Sundry persons, for services as election officers.....		4,665 00	
Edwards Cheney, Clerk.....		55 00	
John P. Farley, Clerk.....		5 00	
Frank B. Peabody, Clerk.....		12 50	
A. F. Salmon, Clerk.....		2 50	
J. S. Lapierre, for serving certificates of elections.....		8 00	
Girard P. Dadman, for stamps.		20 00	
Lowell Electric Light Corp., for lights		302 00	
Wm. H. Wiggin, for lumber...		13 95	
John Callaghan, for repairing ballot boxes.....		1 20	
H. B. Shattuck & Son, for pencils.....		15 90	
Stark Tool Co., for repairing ballot boxes.....		25 60	
C. F. Hatch & Co., for repairing ballot boxes.....		12 50	
		<hr/>	
<i>Amount carried forward</i>	\$	5,686 23	\$ 3,621 38

<i>Amounts brought forward</i>	\$	5,686 23	\$	3,621 38
To C. B. Coburn & Co., for candles, twine, etc.....		16 31		
Simpson & Rowland, for burn- ers and chimneys		3 80		
John Barnes, for printing.....		8 94		
Courier-Citizen Co., for printing and advertising.....		107 10		
Daily News Co., for advertising		43 60		
Lepine & Co., for advertising..		24 00		
Lowell Daily Sun, for printing and advertising.....		20 25		
Morning Mail Co., for printing.		319 50		
Sunday Press, for advertising..		12 00		
Union Printing Co., for print- ing		1 75		
W. H. Boody, for posting. . .		15 00		
Dumas & Co., for labor on check lists		6 00		
F. Blanche Hard, for typewrit- ing		28		
B. M. & M. E. Hutchins, for typewriting		13 04		
Thomas H. Lawler, for pens and pencils		3 00		
Lowell Rubber Co., for rubber bands, etc....		4 90		
G. C. Prince & Son, for station- ery		11 71		
J. L. Severance, for stamp.....		1 65		
Thorpe & Bailey, for printing.		12 00		
Charles Littlefield & Co., for envelopes and rolls.....		22 50		
John W. Stott, Treas., for rent of Savoy Theatre.....		10 00		
Janitors of Ward Rooms as fol- lows :				
Oscar Brown.....		8 15		
J. H. Hallett		6 00		
E. E. Harder.....		4 00		
Dennis Harrington.....		2 00		
Charles D. Harvey.....		4 00		
Michael J. Lynch.....		4 00		
William Mack.....		4 00		
John Manchester.....		12 00		
John F. Merrill.....		4 00		
<i>Amounts carried forward</i>	\$	6,384 71	\$	3,621 38

<i>Amounts brought forward</i>	\$	6,384 71	\$	3,621 38
To George Teel		27 00		
Michael Walsh.....		16 00		
Sundry Persons for Teaming as follows:				
To Ed. Judge.....		75		
D. P. Knowlton.....		12 00		
T. G. Little		75 00		
J. W. Macdonald.....		10 00		
James McLean		6 00		
S. W. Parker.....		4 00		
John Richards.....		10 00		
Wm. Roberts.....		124 00		
F. B. Sherman.....		8 00		
John Sullivan.....		10 00		
James Welch.....		21 00		
Redmond Welch.....		7 00		
J. H. Sparks, for carriage hire.		8 00		
Man. & Con. N. H. Ex. Co., for transportation.....		75		
		<hr/>	\$	6,731 21
Total Expenditure for the year 1898			\$	10,352 59

1897 BILLS.

Paid for SUNDRIES:

To Appropriation for Public Buildings, for labor and material on booths	\$	134 13		
Vox Populi Press, for printing.		38 65		
James P. Donohoe & Co, for refreshments....		16 40		
D. L. Page & Co, for refreshments.....		4 90		
Sundry persons services as janitors				
To Oscar Brown		1 00		
Charles D. Harvey		2 00		
John H. Hallett.....		3 00		
E. E. Harder.....		1 00		
John F. Merrill.....		2 00		
		<hr/>		
<i>Amounts carried forward</i>	\$	203 08	\$	10,352 59

<i>Amounts brought forward</i>	\$	203 08	\$	10,352 59
To George Teel.....		9 00		
Lowell Electric Light Corp., for lighting		205 00		
Charles Littlefield & Co., for repairing boxes.....		11 59		
Stark Tool Co., for repairing boxes.....		55 65		
J. F. Puffer & Son Co., for rent of land.....		25 00		
O. W. Peabody for carriage hire.....		2 00		
Frank Dunlap, for teaming....		1 00		
J. W. Macdonald, for teaming.		6 00		
William Roberts, for teaming..		5 00		
E. E. Stoughton, for teaming..		14 00		
George Whitely, for teaming..		1 50		
		<hr/>	\$	538 82
			\$	10,891 41
<i>Amount carried forward</i>	\$	1,100 00		
Balance returned to General Treas- ury Fund.....		1,165 25	\$	
		<hr/>		2,265 25
			\$	13,156 66

ENGINEERING.

Annual Appropriations	\$8,000 00	
Additional Appropriations	13 04	
	<hr/>	\$ 8,013 04

RECEIPTS.

From Appropriation for City Cemeteries	12 00	
Appropriation for Commons ..	186 38	
Appropriation for Fire Department	8 50	
Appropriation for Grade Crossings	24 00	
Appropriation for Huntington Hall Re-Building	12 00	
Appropriation for Paupers—Almshouse	45 88	
Appropriation for Public Buildings	7 50	
Appropriation for Schools ...	25 75	
Appropriation for Addition to Varnum School	3 00	
Appropriation for Sewer Department Construction . .	1,554 49	
Appropriation for Sewer Department	838 99	
Appropriation for Streets	3,745.24	
Appropriation for Ex. of Street	364 52	
	<hr/>	
<i>Amounts carried forward</i>	\$ 6,828 25	\$ 8,013 04

<i>Amounts brought forward</i>	\$	6,828 25	\$	8,013 04
From Appropriation for Paving Aiken Street.....		208 75		
Appropriation for Ex. of Lundberg Street.....		313 87		
Appropriation for Widening Andover Street.....		115 87		
Appropriation for paving Chelmsford Street.....		18 50		
Appropriation for paving Gor- ham Street.....		330 99		
Appropriation for Watering Streets.....		107 75		
Appropriation for Water Works.....		1,184 38		
		<hr/>	\$	9,108 36
			\$	<hr/> 17,121 40 <hr/>

EXPENDITURES.

Paid George Bowers, City Engineer, Salary.....		2,700 00		
		<hr/>	\$	2,700 00
Paid for SUNDRIES :				
To Sundry Persons, for labor.....	13,266 33			
Appropriation for Streets, for board of horse.....	18 75			
N. E. Tel. and Teleg. Co., for ser- vices.....	50 38			
George Bowers, for office ex- penses.....	19 06			
Arthur Bartlett, for car fares...	5 95			
George A. Nelson, for photo- graphs.....	4 00			
J. C. Bennett, for basket.....	45			
Boutwell Bros., for steel.....	1 17			
Buff & Berger, for repairing in- struments.....	7 20			
George L. Cady & Son, for labor on plumb bobs..	1 15			
W. W. Carey, for labor on sur- veyor's rods.....	4 32			
W. A. Mack & Co., for copper wire.....	1 00			
<i>Amounts carried forward</i>	\$	13,379 76	\$	2,700 00

Amounts brought forward \$ 13,379 76 \$ 2,700 00

To O. A. Richardson's Sons, for repairing tape	3 75
H. B. Shattuck & Son, for typewriter ribbons	1 67
E. L. Sibley, for hardware	2 00
Thompson Hardware Co., for hardware and tools	12 05
Dumas & Co., for plan covers . .	32 45
Frost & Adams, for blue print cloth	3 15
A. L. Kittredge & Co., for tracing cloth, blue print cloth, etc	70 46
Thomas H. Lawler for stationery	23 57
Library Bureau, for stationery	9 50
Lowell Rubber Co., for rubber bands	68
Lowell Sun, for printing	4 00
Morning Mail Co., for printing.	50
G. C. Prince & Son for stationery	8 15
Sampson Murdock & Co., for directories and maps	8 20
Smith, Premier Typewriting Co., for typewriter supplies	14 50
Tilton & Co., for printing	71
Union Printing Co., for printing.	1 00
M. G. Wight & Co., for files and record books	11 00
V. G. Barnard, for stamps	7 00
B & M. R. R. Tickets, for trip tickets	20 25
City Government Publishing Co., for subscription	3 00
Engineering Record for subscription	5 00
Municipal Engineering Co., for subscription	2 00
The Engineering Magazine, for subscription	3 00
C. B. Coburn & Co., for soap . .	1 50
W. H. Spaulding & Co., for labor on rods	6 00
A. H. Cluer, for carriage boot . .	3 00

Amounts carried forward \$ 13,637 85 \$ 2,700 00

<i>Amounts brought forward</i>	\$	13,637 85	\$	2,700 00
To H. F. Ebert, for robes, blankets, whips, etc.....		17 50		
Charles H. Hanson, Jr., for re- pairing harness.....		3 50		
Sawyer Carriage Co., for sleigh and repairing carriages....		63 00		
Riehtie Bros.' Testing Machine Co., for brass plate, cement and test wire.....		29 00		
D. P. Farmer for rent of stable.		12 00		
J. H. Sparks for carriage hire..		5 00		
Am. Ex. Co., for transportation		1 45		
B. & L. Des. Ex. Co, for trans- portation.....		15		
		<hr/>	\$	13,769 45
Total expenditure for 1898,			\$	<hr/> 16,469 45

1897 BILLS.

Paid for SUNDRIES :

To Am. Ex. Co., for transportation	15		
Arthur Bartlett, for car fare...	8 95		
N. E. Tel. and Teleg. Co., for service.....	3 94		
	<hr/>	\$	13 04
		\$	16,482 49
Balance to General Treasury Fund			638 91
		\$	<hr/> 17,121 40

FIRE DEPARTMENT.

Annual Appropriation.....	119,000 00	
Additional Appropriation.....	1,003 44	
	—————	\$ 120,003 44
		120,003 44

EXPENDITURES.

Paid for SERVICES :

To Edward S. Hosmer, Chief Engineer.....	2,000 00	
James F. Norton, Assistant Engineer and Secretary.....	450 00	
George F. Salmon, Assistant Engineer.....	400 00	
Edward Meloy, Assistant Engineer.....	400 00	
H. W. Burton, Assistant Engineer.....	400 00	
Permanent Firemen.....	77,335 28	
Call Firemen.....	19,375 02	
	—————	\$ 100,360 30

Paid for FUEL :

To C. Constantineau, for weighing coal	3 35	
John G. Gordon for weighing coal.....	26.09	
Daniel Gage.....	1,935 70	
D. W. Horne & Son.....	5 87	
	—————	
<i>Amounts carried forward.....</i>	<i>\$ 1,971 01</i>	<i>\$ 100,360 30</i>

<i>Amounts brought forward</i>	\$	1,971 01	\$	100,360 30
To Wm. Kittredge Co.....		148 63		
Wm. E. Livingston.....		80		
Stanley & Co.....		15 75		
G. E. Stanley.....		2 25		
E. A. Wilson & Co.....		44 44		
E. A. Wilson, Agt.....		12 99		
		<hr/>	\$	2,195 87

Paid for HAY, GRAIN, etc.:

To Ames & Co.....	22 50		
B. M. Blake.....	352 25		
Coffey Bros.....	409 14		
J. B. Cover & Co.....	45 88		
C. H. Cutter.....	73 20		
J. F. Denning.....	140 90		
Isaiah Fernald.....	260 36		
G. M. Foster.....	2,041 43		
W. P. Foye.....	90 55		
B. W. Johnson.....	165 56		
Wm. E. Livingston.....	437 86		
James Meek.....	319 87		
H. E. Noyes & Son.....	143 59		
E. S. Sherman & Co.....	563 05		
Vigant, Dumas & Co.....	107 10		
	<hr/>	\$	5,203 24

Paid for HORSES, CARRIAGES,
HARNESSES, etc.:

To Robert Barris.....	7 20		
G. M. Beals.....	2 30		
Charles E. Berry.....	10 50		
A. L. Butman.....	18 00		
A. H. Cluer.....	12 80		
H. F. Ebert.....	141 20		
G. K. Hammond.....	2 80		
C. H. Hanson & Co.....	418 85		
C. H. Hanson, Jr.....	26 30		
D. W. Parker.....	80		
C. W. Perkins & Co.....	15 00		
George H. Taylor.....	8 75		
A. H. Abbott.....	6 75		
E. P. Bryant.....	132 90		
Fay Bros. & Hosford.....	546 51		
Sawyer Carriage Co.....	376 60		

<i>Amounts carried forward</i>	\$	1,727 26	\$	107,759 41
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<i>Amounts brought forward</i>	\$	1,727 26	\$	107,759 41
J. H. Swett		66 21		
Manchester Locomotive Works		1,013 40		
Peter J. Boland		53 49		
Cahill Bros		167 00		
James Blakely		45 25		
Owen J. Carney		89 25		
Desmond & Barrett		7 00		
Cornelius Desmond, Agt.		112 75		
John J. Donnelly		120 45		
T. F. Fennessy		19 65		
Q. A. Foster		48 50		
M. V. B. Libbey		129 05		
H. C. Moore		44 33		
J. S. Mosher		74 80		
A. Parsons		100 29		
Henry Reynolds		48 40		
J. W. Seeton		92 97		
W. H. Ward & Co.		19 00		
		<hr/>	\$	3,979 05

Paid for SUNDRIES:

To Appropriation for Engineering, for Engineering	8 50
Appropriation for Water Works for water	388 35
Lowell Electric Light Corp., for power	325 16
Lowell Gas Light Co., for gas...	1,146 90
N. E. Tel. & Teleg. Co. for ser- vices	455 00
Burnham & Davis, for lumber.	4 15
Davis & Sargent, for lumber...	60
Pratt & Forrest, for lumber....	1 15
Charles E. Adams, for hardware	49 20
American Bolt Co., for bolts...	1 50
W. T. S. Bartlett, for hardware and tools	28 57
Bartlett & Dow, for hard- ware	40 11
J. C. Bennett, for hinges	25
Boutwell Bros., for chain and steel	2 44
H. B. Shattuck & Son, for hard- ware and tools	34 91
Thompson Hardware Co., for cord and hardware	22 29

<i>Amounts carried forward</i>	\$	2,509 08	\$	1 11,738 46
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<i>Amounts brought forward</i>	\$	2,509 08	\$	111,738 46
To H. R. Barker Mfg. Co., for pipe, fittings, labor, etc.....		126 30		
Sturgis C. Baxter, for inspect- ing boilers.....		14 50		
George H. Bennett, for black- smithing.....		13 20		
Boston Woven Hose & Rubber Co., for ladder.....		23 50		
Cornelius Callahan Co., for pipe, ladder, straps, etc.....		13 50		
E. J. Carroll & Co., for fittings and labor.....		18 86		
Coggeshall & Hicks, for tube cleaner....		2 00		
W. E. Decrow, for repairing fire alarm boxes.....		21 16		
Fabric Fire Hose Co., for hose.		543 54		
Josiah Gates & Sons, for coup- lings.....		43 21		
A. S. Jackson, for smoke pro- tectors.....		36 00		
A. Ivan Laughton, for valve, metal, labor, etc.		31 90		
W. A. Mack & Co., for iron, solder and labor.....		7 46		
Manchester Locomotive Works, for pipe, castings, labor, etc		22 87		
Thomas Mather, for brass unions.....		4 24		
McPhee & Co., for gun metal..		39		
C. W. H. Moulton & Co., for hose.....		548 74		
Charles F. Morse, for salamo- niac and wire.....		21 10		
N. E. Gamewell Co., for fire alarm boxes, jars and re- pairing fire alarm boxes...		303 94		
C. N. Perkins & Co., for nozzles and washers.....		18 25		
Calvin L. Randall, Agt., for wrenches.....		9 50		
Rice & Co., for screens.....		1 56		
S. C. Smith, for screws.....		1 75		
J. W. Stewart, for pipe, wash- ers, labor, etc.....		2 78		
D. Taylor, for repairing saws..		2 25		
<i>Amounts carried forward</i>	\$	4,341 58	\$	111,738 46

<i>Amounts brought forward</i>	\$	4,341 58	\$	111,738 46
To Tucke & Parker, for insulators, wire, etc		25 57		
Washburn & Moen Manufactur- ing Co., for wire.....		160 24		
Weir Electric Co., for insula- tors and zinc		9 83		
Weston Electrical Instrument Co., for repairs.....		3 90		
H. H. Wilder & Co., for iron, labor, etc.....		19 53		
American & Continental Sani- tas Co., limited, for soldis.		30 25		
W. H. Barnes & Co., for soap.		43 28		
F. M. Bill & Co., for soap.....		7 00		
Charles E. Carter, for medicines		13 25		
C. B. Coburn & Co., for disin- fectant, plaster paris, brush- es, brooms, etc.....		321 24		
Crystal Oil Co., for oil.....		47 25		
Walter Coburn & Co., for waste.....		15 00		
Garlock Packing Co., for pack- ing		3 23		
Frank Garvey, for medicine...		34 20		
Higsen Bros., for axle grease..		4 32		
Humphrey's Homeopathic Medi- cine Co., for medicine....		7 00		
John G Lesure, for medicine...		4 00		
Pulsifer Chemical Co., for medi- cine.....		4 00		
Rochester Chemical Co., for chemicals		23 52		
C. F. Shourds & Co., for dusters		6 90		
Simpson & Rowland for matches		5 50		
Caleb L. Smith, for soap and matches.....		29 90		
Talbot Dyewood & Chemical Co., for chemicals.....		87 11		
M. E. Thompson, for herbs....		40		
J. D. Whittaker, for harness dressing		12 00		
Adams & Co, for rugs and shades		24 90		
Boston Feather Duster Co., for dusters.....		8 28		
Cook, Taylor & Co., for blankets		27 75		
<i>Amounts carried forward</i>	\$	5,320 93	\$	111,738 46

<i>Amounts brought forward</i>	\$	5,320 93	\$	111,738 46
To C. W. Durant, for badges.....		6 25		
Gookin Bros., for chairs.....		31 25		
E. Hapgood & Son, for repairing mattresses.....		45 95		
A. L. Kittredge & Co., for shades and fixtures.....		14 33		
Alvin Lawrence, for repairing clocks.....		2 00		
Leighton Bros., for pitchers....		75		
Lowell Rubber Co., for packing		2 03		
Middlesex Co., for cloth.....		183 68		
O'Donnell & Gilbride Co., for crash.....		6 18		
A. G. Pollard & Co., for oil cloth, rugs, etc.....		28 02		
Scripture's Laundry, for laun- dering.....		125 48		
Whittier Cotton Mills, for sash cord		4 80		
Mrs. E. M. Woodward, for re- pairing blankets.....		4 00		
Courier-Citizen Co., for blank book		1 75		
Enterprise Printing and Stamp Works, for rubber dies and printing.....		6 50		
Thomas H. Lawler, for stamps.		2 00		
Lowell Daily Sun, for printing.		65 34		
J. Merrill & Son, for directory.		2 50		
G. C. Prince & Son, for blank books		1 80		
M. G. Wight & Co., for printing		12 50		
E. S. Hosmer, for expenses....		88 10		
E. D. Kerwin, for services.....		50 00		
B. & M. R. R. Tickets, for tick- ets.....		20 25		
V. G. Barnard, for stamps		8 00		
Louis Leclair, for refreshments.		37 45		
Charles E. Munn, for services..		24 00		
J. H. Sparks, for services.....		95 00		
Jesse A. Viles, for services....		73 50		
Charles R. Wood & Son, for services.....		139 50		
C. H. Hanson & Co., for use of horses		118 00		
Fred W. Jenness, for pasturing horses.....		45 00		
<i>Amounts carried forward</i>	\$	6,566 84	\$	111,738 46

<i>Amounts brought forward</i>	\$	6,566 84	\$	111,738 46
To P. S. Webster, for storing sleigh		6 00		
American Express Co., for transportation		7 00		
B. & L. Des. Ex. Co., for transportation		80		
B. & M. R. R., for transportation		15 47		
Man. & Con. N. H. Ex. Co., for transportation		11 50		
N. Y. & B. Des. Ex. Co., for transportation		3 40		
N. Y., N. H. & H. R. R. Co., for transportation		7 63		
Stanley & Co., for transportation.		9 00		
		<hr/>	\$	6,627 64
Total Expenditure for the year 1898.....			\$	118,366 10

1897 BILLS,

Paid for SUNDRIES :

To American Express Co., for transportation....	30		
Peter J. Boland, for shoeing horses	2 00		
E. P. Bryant, for blacksmithing	12 00		
Bartlett & Dow, for hardware and packing	3 00		
H. R. Barker Mfg. Co., for pipe, fittings and labor	28 03		
C. B. Coburn & Co., for glass, packing, rope, etc	6 75		
Crystal Oil Co., for oil	18 49		
Owen J. Carney, for shoeing horses	7 00		
Chahill Bros., for shoeing horses	14 00		
A. H. Cluer, for repairing harness	5 50		
Desmond & Barrett, for shoeing horses	6 00		
	<hr/>		
<i>Amounts carried forward</i>	98 07	\$	118,366 10

<i>Amounts brought forward</i>	\$	98 07	\$ 118,366 10
To Davis & Sargent, for sawdust..		1 50	
H. F. Ebert, for repairing harnesses		6 50	
Fay Bros. & Hosford, for repairing carriages.....		10 66	
Globe File Works, for recutting files		10 80	
Josiah Gates & Sons, for leather and labor.....		5 25	
G. K. Hammond, for repairing harness		30	
C. H. Hanson, Jr., for repairing harness.....		70	
Wm. L. Hills, for services.....	200 00		
M. V. B. Libbey, for shoeing horses		9 15	
Lowell gas Light Co., for gas..		39 30	
Lowell Electric Light Corp., for power		10 39	
Lowell Rubber Co., for gaskets.		1 20	
Manchester Locomotive Works for packing.....		4 50	
H. C. Moore, for shoeing horses-		27 66	
Manchester & Concord Ex. Co., for transportation.....		90	
John J. Donnelly for shoeing..		4 35	
A. D. Mitten, for shoeing		17 05	
J. S. Mosher, for shoeing.....		23 00	
W. H. Ward, for shoeing.....		4 00	
A. Parsons, for blacksmithing..		7 80	
N. E. Gamewell Co., for supplies	466 75		
N. Y. & B. Des. Ex. Co., for transportation.....		50	
Henry Reynolds, for shoeing horses.....		8 25	
Simpson & Rowland, for matches.....		5 50	
Scripture's Laundry, for laundering.....		6 54	
J. H. Sweat, for repairing carriage		4 89	
Sawyer Carriage Co., for repairing carriage.....		5 20	
George H. Taylor for repairing harnesses.....		3 65	
<i>Amounts carried forward</i>	\$	984 36	\$ 118,366 10

<i>Amounts brought forward</i>	\$	984 36	\$	118,366 10
To Thompson Hardware Co., for hardware.....		1 25		
Tucke & Parker, for recharging batteries, etc.....		12 35		
D. H. Wilson & Co., for fittings, solder and labor.....		4 28		
H. H. Wilder & Co., for copper		80		
C. Zimmer, for keys		40		
		<hr/>	\$	1,003 44
			\$	119,369 54
Balance to General Treasury Fund				633 90
			\$	<hr/> 120,003 44 <hr/>

GRADE CROSSINGS.

Balance Undrawn Jan. 1, 1898.....	1,765 64	
Overdrawn.....	29 05	
	\$	1,794 69

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineer- ing, for Engineering.....	24 90	
Sundry persons for labor.....	155 06	
B. & M. R. R., decree of court.	1,309 15	
James Boyle, for damage to property.....	200 00	
Charles F. Coburn, for record- ing.....	85	
C. B. Coburn & Co, for oil....	2 30	
A. P. Bateman, for lumber....	1 85	
Wm. H. Wiggin, for lumber...	23 48	
Alfred Barney for appraising property and attendance at court.....	30 00	
B. F. Heald, for teaming.....	48 00	
	\$	1,794 69
Total Expenditures for the year 1898.....		1,794 69

HEALTH DEPARTMENT.

Annual Appropriation.....	\$	34,000 00	
Additional Appropriation.....		7,494 74	
		<u> </u>	\$ 41,494 74

RECEIPTS.

From Appropriations for Commons, for medicine, horse and shoeing.....	\$	58 00	
Appropriation for Water Works, for overdraft.....		1 80	
		<u> </u>	\$ 59 80
			<u>\$ 41,554 54</u>

EXPENDITURES.

Paid for SERVICES :

To Thomas F. Harrington, salary..	\$	500 00	
James Bayles, salary.....		201 61	
William F. Curtin.....		200 27	
Thomas J. Mulligan.....		299 73	
Edmund H. Packer.....		298 39	
		<u> </u>	\$ 1,500 00
<i>Amount carried forward.....</i>			<u>\$ 1,500 00</u>

<i>Amount brought forward.</i>	\$	1,500 00	
Paid Horace H. Knapp, Agt., salary.....	\$	630 00	\$ 630 00
Paid Sundry persons for labor.	\$	31,995 13	\$ 31,995 13

Paid for HAY, GRAIN, etc. :

To B. M. Blake.....	\$	177 45	
J. B. Cover & Co.....		492 10	
J. F. Denning.....		203 09	
Charles Dumas.....		174 74	
Eben T. Fox.....		87 25	
W. P. Foye.....		75 42	
C. H. Hanson & Co.....		177 06	
George L. Huntoon.....		106 63	
B. W. Johnson.....		154 12	
Wm. E. Livingston.....		93 00	
E. S. Sherman & Co.....		99 94	
Vigeant, Dumas & Co.....		177 96	
E. N. Wood & Co.....		601 79	
		<hr/>	\$ 2,620 55

Paid for Horses, Carriages, Harnesses, etc. :

To Charles E. Adams.....		44 17	
Archibald Wheel Co.....		64 47	
W. T. S. Bartlett.....		148 03	
Israel Bent.....		15 26	
T. M. Bolton.....		10 00	
Boutwell Bros.....		85 53	
A. H. Cluer.....		123 55	
J. C. Donovan.....		2 50	
H. F. Ebert.....		5 29	
Charles H. Hanson, Jr.....		34 20	
C. H. Hanson & Co.....		12 00	
L. S. Kimball.....		6 25	
Sawyer Carriage Co.....		45 76	
Owen J. Carney.....		1 75	
		<hr/>	\$ 598 76

Paid for SUNDRIES :

To Appropriation for Water Works for water.....		79 53	
Lowell Gas Light Co., for gas..		68 00	
		<hr/>	
<i>Amounts carried forward.</i>	\$	147 53	\$ 37,344 44

<i>Amounts brought forward</i>	\$	147 53	\$	37,344 44
To N. E. Tel. & Teleg. Co., for service.....		215 08		
Burnham & Davis, for lumber..		54 30		
Howe Lumber Co., for lumber..		9 50		
Wm. H. Kimball, for labor.....		2 00		
Wm. H. Wiggin, for lumber...		2 60		
Amasa Pratt & Co., for lumber.		37 30		
Charles E. Adams, for sulphur can, alcohol, etc.....		40 05		
Bartlett & Dow, for hardware..		16 03		
J. C. Bennett, for paint.....		19 01		
Globe File Works, for files....		4 05		
W. T. S. Bartlett, for tools....		5 40		
H. B. Shattuck & Son, for hardware.....		12 69		
Thompson Hardware Co., for hardware.....		3 09		
John Callaghan, for grate and pans		3 75		
Drury & Green, for pipe, solder, and labor.....		35 18		
W. A. Mack & Co., for fumigating stands		19 50		
H. H. Wilder & Co., for basins, radiators, tubings, etc....		10 30		
Carleton & Hovey, for medicine.		8 50		
Charles E. Carter, for liniment.		10 00		
C. B. Coburn & Co., for borax, oil, sponges, etc.....		92 26		
Crystal Oil Co., for oil.....		2 48		
Eimer & Amend, for supplies for Bacteriological Department.....		23 46		
Ellingwood & Co., for vaccine points, etc.....		53 49		
Franklin Educational Co., for tube caps.....		11 66		
F. K. Hubbard, for medicine...		8 00		
Hartwell & Co., for tubs		1 44		
Leach & Green, for surgical instruments		10 00		
Melvin & Badger, for formaldehyde.....		30 00		
O. B. Ranlett, for matches.....		3 25		
Caleb L. Smith, for soap.....		3 50		
Smith & Goold, for lotions....		3 15		
<i>Amounts carried forward</i>	\$	898 55	\$	37,344 44

<i>Amounts brought forward.....</i>	\$	898 55	\$	37,344 44
To Talbot Dyewood & Chemical Co., for chemicals.....		11 84		
M. E. Thompson & Co., for medicines.....		6 10		
Wm. C. Wright, for Serum tubes.....		15 00		
Connors Bros., for weighing and rent of land.....		178 25		
F. H. Farmer, for wood.....		38 80		
Daniel Gage, for wood.....		14 87		
D. W. Horne & Son, for coal..		23 66		
Wm. E. Livingston, for coal...		449 04		
E. A. Wilson, Agt., for coal...		26 17		
Samuel E. Snow, for mason work and material.....		88 01		
John Cross, for duck covers...		18 00		
Lowell Rubber Co., for horse cover.....		8 00		
S. C. Mussey, for laundering...		3 55		
O'Sullivan Bros., for rubber boots.....		3 50		
Parent's Steam Laundry, for laundering.....		86		
A. G. Pollard & Co., for dry goods.....		1 44		
J. F. Puffer & Son, for furniture		23 00		
Putnam & Son, for clothing...		1 95		
V. G. Barnard, for stamps.....		13 00		
F. A. Bates, for rent of P. O. box.....		3 00		
C. L. Fox, for professional services.....		355 01		
Stephen Garrity, for expenses to Boston....		1 20		
Wm. A. Johnson, for professional services.....		281 00		
F. E. Saunders, for barometer and temperature reading, etc.....		64 50		
Thomas B. Smith, for professional services.....		113 65		
C. A. Grossman, for analysis of ashes.....		18 00		
Peter H. Savage, for interment of bones.....		6 00		
<i>Amounts carried forward.....</i>	\$	2,665 95	\$	37,344 44

Amounts brought forward..... \$ 2,665 95 \$ 37,344 44

To Massachusetts Association Boards of Health, for as- sessments..	4 50
Massachusetts Association Plumbing Inspectors, for assessments.....	20 00
Ballard & Kirschbaum, for rent of telephone index.....	1 00
John Barnes, for printing.....	3 05
Courier-Citizen Co., for printing and subscription.....	13 50
Damrell & Upham, for book...	2 50
Dumas & Co., for blank books.	17 50
J. L. Fairbanks & Co., for paper.....	3 00
Hammond Typewriter Co., for repairing typewriter.....	1 73
Hutchins Rubber Type Foun- dry, for stamp.....	50
Thomas H. Lawler, for station- ery and stamps.....	53 10
Library Bureau, for stationery..	11 55
Lowell Daily Sun, for printing.	44 95
McIndoe-Butterfield Co., for printing.....	3 00
Henry M. Meek, for Lowell & Suburban Directory.....	2 00
Morning Mail Co., for printing.	11 00
G. C. Prince & Son, for station- ery.....	5 63
Sampson, Murdock & Co., for directories.....	4 00
J. L. Severance, for stamps....	2 30
Thorpe & Bailey, for printing..	13 75
Tilton & Co., for stationery....	3 48
Thompson & Hill, for printing.	116 02
F. A. M. Tobin, for printing...	12 50
Union Printing Co., for print- ing.....	27 15
Vox Populi Press, for print- ing.....	39 75
M. G. Wight & Co., for station- ery.....	6 19
E. F. Hathaway, for painting signs.....	15 00

Amounts carried forward..... \$ 3,104 61 \$ 37,344 44

<i>Amounts brought forward</i>	\$	3,104 61	\$	37,344 44
To Lowell Rubber Co., for rubber apron.....		1 25		
Merrimac House, for refreshments.....		2 00		
Thomas F. Fay, for cleaning vault.....		4 00		
Charles R. Wood, for professional services.....		137 00		
Charles Clapp, for use of horses.....		25 00		
C. H. Hanson & Co., for use of horses.....		103 25		
J. H. Sparks, for board of horse.....		91 72		
Wm. Haggerty, for teaming...		2 50		
Morse Coach Co., for carriage hire.....		9 00		
American Ex. Co., for transportation.....		4 45		
B. & M. R. R., for transportation.....		82		
N. Y. & B. Des. Ex. Co., for transportation....		2 00		
		<hr/>	\$	3,487 60
Total Expenditure for the year 1898.....			\$	40,832 04

1897 BILLS.

Paid for SUNDRIES :

To American Express Co., for transportation.....	\$	15		
Israel Bent, for leather.....		2 67		
T. M. Bolton, for repairing harness.....		1 00		
W. T. S. Bartlett, for hardware.....		36 52		
John Gallagher, for pails.....		50		
Boutwell Bros., for chain and iron.....		5 98		
J. B. Cover & Co., for corn...		19 60		
C. B. Coburn & Co., for brushes, oil and tar.....		2 20		
C. L. Fox, for professional services.....		52 50		
Daniel Gage, for ice.....		5 35		
		<hr/>		
<i>Amounts carried forward</i>	\$	126 47	\$	40,832 04

<i>Amounts brought forward</i>	\$	126 47	\$	40,832 40
To Wm. E. Livingston, for coal...		4 80		
Lowell Gas Light Co., for gas...		2 10		
Lowell Hospital Association, for board, medicine and atten- dance of Bessie Duren.....		2 86		
N. E. Tel. & Teleg. Co., for ser- vices.....		15 48		
E. S. Sherman & Co., for grain.		23 76		
Tilton & Co., for stationery...		1 00		
Thompson Hardware Co., for hardware.....		66		
Vox Populi Press, for printing.		2 00		
Union Printing Co., for print- ing.....		1 75		
E. A. Wilson, Agt., for coal....		10 86		
Charles R. Wood, for services..		3 00		
		<hr/>		194 74
			\$	41,026 78
Balance to General Treasury Fund				527 76
			\$	<hr/> 41,554 54 <hr/>

HEATING CITY HALL AND MEMORIAL BUILDING.

Annual Appropriation	\$	5,500	00
Additional Appropriation		726	84
		\$	6,226 84

EXPENDITURES.

Paid for SUNDRIES :

To Sundry persons for labor	\$	2,430	57
Cyrille Constantineau, for weighing and inspecting coal			1 72
John G. Gordon, for weighing and inspecting coal		25	01
Daniel Gage, for coal		1,469	60
D. W. Horne & Son, for coal		1,431	71
Wm. Kittredge & Co., for coal		58	63
E. A. Wilson, Agt., for coal		121	44
E. A. Wilson, Agt., for cement and brick		2	53
Burnham & Davis, for lumber		4	16
H. R. Barker Mfg. Co., for plates, packing, etc.		54	82
George H. Bennett, for repairing fork		1	50
Deane Steam pump Co., for springs and valves		20	10
<i>Amount carried forward</i>	\$	5,621	79

<i>Amount brought forward</i>	\$	5,621 79	
To Wm. H. Hope & Co., for bolts and nuts.		1 81	
Knowlton Packing Co., for packing.....		25 06	
Middlesex Machine Co., for water glasses		1 00	
W. A. Morrison, for valves....		8 00	
Calvin Randall, for wrench blocks.....		6 00	
Henry R. Worthington, for pump.....		58 50	
Scannell & Wholey, for tank..		43 00	
H. B. Shattuck & Son, for hoe.		40	
C. B. Coburn & Co., for waste, oil, etc.		49 70	
Eagle Oil & Supply Co., for oil.		5 00	
Gould Packing Co., for packing		17 88	
Talbot Dyewood & Chemical Co., for sal soda.....		3 00	
<hr/>			
Total Expenditure for the year 1898.....	\$		5,841 14

1897 BILLS.Paid for **SUNDRIES** :

To Daniel Gage, for coal.....	\$	214 35	
John G. Gordon, for weighing coal.....		7 50	
Joel Knapp & Son, for wrench.		5 00	
<hr/>			\$ 226 84
			<hr/>
			\$ 6,067 98
Balance to General Treasury Fund			158 86
			<hr/>
			\$ 6,226 84
			<hr/>

HUNTINGTON HALL.

Annual Appropriation.....	\$	2,500 00	
Additional Appropriation.....		158 08	
		_____	\$ 2,658 08

EXPENDITURES.

Paid for SUNDRIES :

To Sundry persons for labor.....	\$	645 50	
Appropriation for Commons, for teaming.....		112 00	
Appropriation for Public Buildings. for labor and material		13 75	
B. & M. R. R., for ground rent		475 00	
O. E. Averill, for blacksmithing		4 60	
F. B. Hill & Co., for blacksmithing		4 70	
Farrell & Conaton, for pipe, fittings and labor.		68 80	
Courier-Citizen Co., for printing		1 75	
Thomas H. Lawler, for blank book		1 33	
James Mullen, for coal.....		8 00	
D. W. Horne & Son, for coal,..		139 75	
D. F. Lyons, for teaming.....		15 00	
G. E. Stanley, for teaming.....		10 00	

Total Expenditure for the year 1898.....	\$		1,500 18
<i>Amount carried forward.....</i>	\$		1,500 18

Amount brought forward..... \$ 1,500 18

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Police, for services of officers.....	\$ 6 88	
Daniel Gage, for wood.....	4 00	
D. W. Horne & Son, for coal..	140 00	
Harwood Manufacturing Co., for fibre seats.....	7 20	
	<hr/>	\$ 158 08
		<hr/>
		\$ 1,658 26
Balance to General Treasury Fund		999 82
		<hr/>
		\$ 2,658 08
		<hr/>
		<hr/>

HUNTINGTON HALL—RE-BUILDING.

Appropriated from General Treasury Fund.....	\$ 36,000 00	
	<u> </u>	\$ 36,000 00

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering.....	\$ 12 00	
Appropriation for Public Buildings, for labor and material	101 38	
Wm. T. True, for expenses to Boston and Worcester....	20 75	
Everett M. Gardner for labor on plans.....	434 60	
C. F. Hatch & Co., for drafting paper.....	13 70	
A. L. Kittredge & Co., for tracing paper.....	1 75	
W. H. Spalding & Co., for tracing cloth, pencils, etc..	13 18	
B. & M. R. R. for repairs on building.....	3,987 02	
Wm. H. Wiggin, for lumber...	294 12	
	<u> </u>	
Total Expenditures for the year 1898.....		\$ 4,878 50
Balance carried forward.....		\$ 31,121 50
		<u> </u>
		\$ 36,000 00

INCIDENTALS.

Annual Appropriation.....	\$	11,000 00	
		<hr/>	\$ 11,000 00
Received from Appropriation for Mayor's Department, for reports.....	\$	5 60	
		<hr/>	5 60
			<hr/>
	\$		11,005 60
			<hr/>
			<hr/>

EXPENDITURES.

Paid on account of July 4th. :

To Appropriation for Public Build- ings, for labor and mater- ial.....	\$	19 87	
Dumas & Co., for badges.....		15 00	
O. L. Field, for refreshments...		7 50	
D. L. Page Co., for lemonade..		100 00	
Lowell Military Band, for ser- vices.....		60 00	
Joseph Johnson, for ringing St. Patrick's chimes....		10 00	
Edward S. Swift, for ringing St. Anne's chimes.....		10 00	
J. H. Sparks, for carriage hire..		2 00	
		<hr/>	
<i>Amount carried forward.....</i>	\$		224 37

Amounts brought forward..... \$ 1,073 29 \$ 424 20

To Postal Telegraph Cable Co., for Telegrams.. .. .	1 32
W. U. Teleg. Co., for telegrams	17 06
R. A. Griffiths, for floral design	15 00
Whittet & Co., for floral design	30 00
Borjes' Military Band, for music	18 00
Lowell Military Band, for ser- vices	25 00
National Band, for services....	75 00
James P. Donohoe & Co., for refreshments	30 00
Richardson's Hotel, for refresh- ments	19 60
St. Charles Hotel, for refresh- ments.....	1 50
Courier-Citizen Co., for badges and printing.....	11 15

Sundry persons for carriage hire
as follows :

Joseph Albert.....	21 00
Amedee Archambault	12 00
M. S. Knowlton.....	2 00
Morse Coach Company.....	115 70
James McKenna.....	1 50
P. F. McNulty.....	16 60
J. E. O'Donnell.....	11 00
J. H. Sparks.....	43 00
C. B. Thompson	2 00
George H. Taylor.....	3 00
John A. Weinbeck.....	17 50

1,561 62

Paid on account of INVESTI-
GATING ASSESSORS'
DEPARTMENT :

To Appropriation for City Treas- urer, for railroad tickets... \$	4 60
Appropriation for Mayor's De- partment, for railroad tick- ets, and services of Mayor's Clerk	11 01
Appropriation for Paupers, Out Door Relief, for railroad tickets.....	10 90

Amounts carried forward..... \$ 26 51 \$ 1,985 82

<i>Amounts brought forward</i>	\$	26 51	\$	1,985 82
To Oliver A. Libby, for expenses of Committee.....		47 90		
S. T. Carkins, for services.....		7 50		
Frank W. Hall, for services....		90 00		
Agnes T. Horan, for services...		2 25		
Courier-Citizen Co., for advertising.....		12 50		
Daily News Co., for advertising.		6 25		
Lowell Daily Sun, for advertising		5 00		
Lowell Sunday Press, for advertising.....		2 50		
Thompson & Hill, for printing.		12 00		
		<hr/>		212 41

Paid on account of INVESTIGATION OF HEALTH DEPARTMENT:

To Appropriation for Mayor's Department, for services of clerk.....	\$	3 28		
L. A. Derby, for expenses		10 20		
Frank W. Hall, for services....		85 00		
		<hr/>		98 48

Paid on account of COMMITTEE ON APPROPRIATIONS:

To Appropriation for Assessor's Department, for services of Stephen J. Kirby.....	\$	92 04		
Mary C. Brennan, for services..		4 90		
Malcolm M. Currier, for services.....		2 50		
Frank W. Hall, for services ..		48 50		
Morning Mail, for printing		10 00		
		<hr/>		157 94

Paid for BAND CONCERTS:

To Cadet Band.....	50 00			
Lowell Military Band.	50 00			
National Band.....	100 00			
	<hr/>			200 00
<i>Amount carried forward</i>			\$	2,654 65

Amount brought forward..... \$ 2,654 65

Paid on account of MEMORIAL
DAY :

To Charles A. Donaghue, Treasurer Joint Memorial Day Committee, per resolution	\$	1,000 00	
		<hr/>	1,000 00

Paid CLERK COMMON COUN-
CIL :

To Frank N. Owen, salary	\$	25 00	
Frank M. Dowling, salary		275 00	
		<hr/>	300 00

Paid FISH WARDEN :

To George T. Spence, salary	\$	40 00	
		<hr/>	40 00

Paid POUND KEEPER :

To Lawrence J. Thyne, salary	\$	5 00	
		<hr/>	5 00

Paid for SUNDRIES :

To Nathaniel E. Annis, for over payment to City Treasurer. \$	21 68	
Appleton National Bank, for rent of boxes in Safety Deposit Vault	100 00	
V. G. Barnard, for postage stamps and postal cards...	10 00	
J. W. Bennett, for expenses to Boston on hearing for bridge over Charles River.	3 80	
Charles F. Coburn, for recording deeds	1 95	
F. W. Hall, for sundry reports.	18 00	
F. Blanche Hard, for typewriting	1 12	
B. M. & M. E. Hutchins, for typewriting and supplies..	12 15	
Nellie M. Piper, for typewriting	5 95	
	<hr/>	

<i>Amounts carried forward</i> \$	174 65	\$	3,999 65
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<i>Amounts brought forward.....</i>	\$	174 65	\$	3,999 65
To F. E. Rollins, for typewriting and supplies		80 40		
John J. Hunt, for engrossing resolutions....		46 00		
Alvin Lawrence, for care clock High Street Church.....		50 00		
Joseph Peabody, Agt., for insur- ance.....		84 06		
Harry Raynes, for gavel and block.....		21 00		
C. W. Whidden, for examing accounts.....		499 50		
B. & M. R. R. Tickets for ticket....		20 25		
John Barnes, for printing		234 42		
John Carter & Co., for paper..		624 96		
Dumas & Co., for binding May- or's address.....		3 50		
Greenough, Adams & Cushing, for ink.....		7 80		
T. H. Lawler, for stationery...		6 64		
Sampson, Murdock & Co., for directories.....		8 00		
Courier-Citizen Co., for printing and advertising.....		12 32		
Daily News Co., for advertis- ing		9 50		
Lowell Sunday Press, for adver- tising.....		2 25		
Lowell Daily Sun, for advertis- ing.....		9 00		
Morning Mail Co., for printing and advertising.....		42 25		
Thompson & Hill, for printing.		3 25		
Vox Populi Press, for printing.		2 00		
Joseph W. Bruce, for damage to wagon....		15 00		
Patrick Craig, for personal in- juries		66 00		
James E. Driscoll, for damages.		58 00		
Timothy E. Flynn, for damages		25 00		
Hattie Fox, for damages.....		15 00		
F. E. McNabb, for damages...		75 00		
John Payne, for damages.....		100 00		
R. A. Griffiths, for floral design		16 50		
<i>Amounts carried forward.....</i>	\$	2,312 25	\$	3,999 65

<i>Amounts brought forward</i>	\$	2,312 25	\$	3,999 65
To Patten & Roberts, for floral decorations		25 00		
O'Donnell & Gilbride, for decorations, use of chairs, etc.		38 65		
Whittet & Co., for bouquets, cut flowers and floral designs.....		107 78		
Charles F. Young & Co., for decorations.....		90 00		
C. B. Coburn & Co. for duster and broom.....		85		
Hotel Belvidere, for refreshments.....		4 00		
John F. Mack, for refreshments		5 30		
H. C. Church & Son, for insurance on pictures and frames.....		159 44		
George E. Stanley, for transporting pictures		6 00		
Williams and Everett, for labor on pictures.....		295 90		
Sophia A. Pierce, for land for rifle range.....		50 00		
Eliza H. Torsey, for land for rifle range.....		50 00		
Borjes' Military Band, for services at flag raising.....		50 00		
Wm. H. Wiggin, for flag pole.		244 00		
Joseph Albert, for carriage hire		10 00		
E. H. Morse, for carriage hire..		4 00		
Morse Coach Co., for carriage hire.....		56 75		
J. H. Sparks, for carriage hire.		6 00		
American Express Co., for transportation.....		9 04		
Manchester & Concord Express Co., for transportation.....		1 65		
		<hr/>	\$	3,526 61
Total Expenditure for the year 1898				7,526 26
Transferred to General Treasury Fund, per resolution of City Council.....	\$	1,000 00		
Balance to General Treasury Fund.....		2,479 34		
		<hr/>	\$	3,479 34
			\$	<hr/> <hr/> 11,005 60

INSPECTION OF ANIMALS, PROVISIONS, ETC.

Annual Appropriation.....	\$	500 00	
		<u> </u>	\$ <u>500 00</u>

EXPENDITURES.

Paid Walter A. Sherman, Salary...	\$	500 00	
		<u> </u>	\$ <u>500 00</u>

INSPECTION OF MILK, VINEGAR, ETC.

Annual Appropriation.....	\$	1,923	00	
Additional Appropriation.....			5 62	
			\$	1,928 62

EXPENDITURES.

Paid for SUNDRIES :

To	Thomas O. Allen, inspector.....	\$	1,500	00
	Thomas O. Allen, for sundry expenses.....			23 94
	James E. Hill, for services.....		180	00
	Appropriation for Public Buildings, for labor and material.....		11	01
	Malcolm M. Currier, for type-writing.....		1	00
	V. G. Barnard, for stamps.....		11	00
	C. B. Coburn & Co., for alcohol, corks, etc.....		4	93
	Eimer & Amend, for laboratory supplies.....		3	85
	Franklin Educational Co., for porcelain dishes.....		6	51
	Talbot Dyewood & Chemical Co., for chemicals.....		1	50
	<i>Amount carried forward.</i>	\$	1,743	74

Amount brought forward..... \$ 1,743 74

To John A. Webster & Co., for laboratory supplies.....	11 00
Thompson Hardware Co., for weight.....	1 00
John Barnes, for printing.....	5 80
Courier-Citizen Co., for print- ing.....	1 80
Henry M. Meek, for directory..	2 00
Hutchins Rubber Type Foun- dry, for stamps.	25
Thomas H. Lawler, for stamps.	7 33
Lowell Sun, for books	11 00
G. C. Prince & Son, for station- ery.....	1 47
Sampson, Murdock & Co., for directory.....	2 00
Tilton & Co., for stationery....	80
Union Printing Co., for print- ing.....	1 00
Lowell Rubber Co., for pails...	4 00
Tucke & Parker, for desk lamp and furnishings.....	9 82
George F. Allen, for bag.....	5 00
H. F. Ebert, for weight rein...	1 25
John Cross, for storing, and put- ting up awning.....	1 00
E. H. Morse, for wagon and carriage hire.....	101 50
B. & L. Des. Ex. Co., for transportation.....	50
Bennett F. Davenport, for an- alysis of asphalt.....	10 00

Total Expenditure for the year
1898.....

1,922 26

1897 BILLS.

Paid for SUNDRIES :

To Franklin Educational Co., for bottles.....	1 87
Daniel Gage, for ice	3 00

Amounts carried forward..... \$ 4 87 \$ 1,922 26

INSPECTION OF MILK, VINEGAR, ETC.

91

<i>Amounts brought forward</i>	\$	4 87	\$	1,922 26
To Man. and Con. N. H. Ex. Co., for transportation.....		75		
		<hr/>	\$	5 62
			\$	<hr/> 1,927 88
Balance to General Treasury Fund.....			\$	74
			\$	<hr/> 1,928 62
				<hr/>

INSURANCE.

Appropriated from General Treasury			
Fund	\$	3,250 00	
		\$	3,250 00

EXPENDITURES.

Paid for INSURANCE:

To H. C. Church & Son.....	\$	427 50	
Thomas C. Lee & Co.....		285 00	
Nicholas G. Norcross.....		285 00	
Joseph Peabody, Agt		427 50	
Total Expenditure for the year			
1808.....	\$		1,425 00
Balance carried forward.....			1,825 00
			\$ 3,250 00

INTEREST.

Annual Appropriation.....	\$ 115,000 00	
Additional Appropriation.....	1,341 89	
Overdrawn	2,802 89	
	<hr/>	\$ 119,144 78

EXPENDITURES.

Paid on account of INTEREST :

To Bowery Savings Bank.....	\$ 6,000 00
Susan B. Cabot.....	825 00
Central Savings Bank.....	3,346 25
Commonwealth of Massachu- setts.....	7,346 53
Essex Savings Bank... ..	216 00
Lowell Institution for Savings..	34,584 83
N. E. Mutual Life Insurance Co	684 00
New York Savings Bank.....	2,000 00
E. H. Rollins & Son.....	1,700 00
Salem Five Cent Savings Bank.	200 00
Seamen's Bank for Savings....	6,050 00
Sundry persons, (bonds).....	38,309 86
Edgerly & Crocker, (temporary loans).....	2,047 50
Wm. A. Gray & Co., (temporary loans).....	1,385 42
George Mixter, (temporary loans).....	1,144 98
	<hr/>
<i>Amount carried forward.....</i>	<i>\$ 105,840 37</i>

<i>Amount brought forward</i>	\$	105,840 37
To F. S. Mosely & Co., (temporary loans)		10,152 23
National Bank of Redemption, (temporary loans).....		718 75
Ministry at Large.....		600 00
Treasurer High Street Church..		60 00
Trustees Public Burial Grounds		273 43
Trustees Estate Thos. Nesmith.		1,500 00
<hr/>		
Total Expenditure for the year 1898.....		\$ 119,144 78
<hr/>		

LAW DEPARTMENT.

Annual Appropriation.....	\$	7,619 73	
Additional Appropriation.....		248 80	
		<u> </u>	\$ 7,868 53
Received from Appropriation for Mayor's Department, for services of Malcom M. Currier.....	\$	12 00	
		<u> </u>	\$ 12 00
			<u>\$ 7,880 53</u>

EXPENDITURES.

Paid CITY SOLICITOR:

To Francis W. Qua, salary.....	\$	3,000 00	
		<u> </u>	\$ 3,000 00

Paid for SUNDRIES:

To Appropriation for Police, for services of M. E. McDonald	\$	1,200 00	
Francis W. Qua, for expenses in sundry cases.....		696 27	
Malcolm M. Currier, for ser- vices		121 71	
Helen A. Dimon, for services..		471 14	
N. E. Tel. & Teleg. Co., for service		91 33	
		<u> </u>	
<i>Amounts carried forward.....</i>	\$	2,580 45	\$ 3,000 00

<i>Amounts brought forward</i>	\$	2,580 45	\$	3,000 00
To M. S. Clark, Cashier, for services		4 00		
I. I. Doane, for copies of evidence		14 00		
F. G. Morris, for copies of evidence		113 82		
Middlesex County, for copies of declarations		22 45		
Proprietor of Decisions, for copy of decision, Howe vs. City		3 75		
U. S. District Court, for copy of evidence, Chandler Adjustable Chair & Desk Co. vs. City		4 50		
Harry A. Brown, for professional services		225 00		
J. Joseph Hennessy, for professional services		3 00		
Albert M. Moore, for services		25 00		
George F. Stiles, for serving writ		4 60		
Wm. Bass, for services		55 00		
Clark F. Cutting, for services		5 00		
J. C. Irish, for services		50 00		
Wm. E. Livingstone, for attendance at hearing, Merrill vs. City		5 00		
Sundry Persons for Services as Witnesses in case of Erie Telephone Co., vs. City, as follows :				
Charles F. Coburn		5 60		
Frank M. Dowling		7 10		
Girard P. Dadman		5 60		
Fred N. Edgell		5 60		
Stephen J. Kirby		8 60		
Wm. P. McCarthy		6 10		
John P. Mahoney		7 10		
John E. Maguire		4 10		
Nathan D. Pratt		5 60		
Robert L. Read		7 10		
William J. Reardon		4 10		
Andrew G. Stiles		4 10		
Abel Wheeler		8 95		
Charles C. Wilson		1 55		
<i>Amounts carried forward</i>	\$	3,196 77	\$	3,000 00

<i>Amounts brought forward</i>	\$	3,196 77	\$	3,000 00
To John Barnes, for printing.....		2 99		
V. G. Barnard, for postage stamps.....		2 00		
John F. Bell, for book.....		3 00		
Ballard & Kirschbaum, for rent of telephone index.....		2 00		
F. S. Blanchard & Co., for Massachusetts Year Book.....		1 50		
A. H. Sanborn, for photographs.....		17 00		
B. M. & M. E. Hutchins, for typewriting.....		26 50		
Thomas H. Lawler, for stationery.....		19 85		
Little, Brown & Co., for books.		318 35		
Morning Mail Co., for printing.		43 35		
G. C. Prince & Son, for stationery.....		2 15		
Sampson, Murdock & Co., for directory.....		2 00		
Smith Premier Typewriter Co., for carbon.....		3 25		
Tilton & Co., for stationery...		20		
Edward Thompson & Co., for books.....		30 00		
F. A. M. Tobin, for printing...		2 50		
Adams & Co., for desk and book case.....		38 00		
J. T. Carter & Co., for oak steps.....		7 76		
J. A. Gregoire, for carriage hire		370 00		
Thomas Kerwin, for carriage hire		2 50		
Morse Coach Co., for carriage hire		3 50		
E. H. Morse, for carriage hire..		3 00		
American Express Co., for transportation		96		
		<hr/>	\$	4,099 13
Total Expenditure for the year 1898.....			\$	7,099 13
<i>Amount carried forward</i>			\$	7,099 13

Amount brought forward.....

\$ 7,099 13

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Police, for services of Officer McDonald.....	\$	101	92	
American Express Co., for transportation.....			15	
Harry A. Brown, for professional services.....		100	00	
Malcolm M. Currier, for services		17	14	
J. A. Gregoire, for carriage hire		11	00	
Thomas Kerwin, for carriage hire		7	00	
B. M. & M. E. Hutchins, for paper		2	00	
Thomas H. Lawler, for stationery		2	40	
N. E. Tel. & Teleg. Co., for services		7	19	
	<hr/>			\$ 248 80
				<hr/>
				\$ 7,347 93
Balance to General Treasury Fund				532 60
				<hr/>
				\$ 7,880 53
				<hr/>

LIBRARY.

Annual Appropriation.....	\$	15,000 00	
Additional Appropriation.....		183 92	
		<u> </u>	\$ 15,183 92
Received from Library Bureau			
Overdraft.....	\$	6 14	
		<u> </u>	6 14
			<u> </u>
	\$		<u>15,190 06</u>

EXPENDITURES.

Paid to LIBRARIAN:

To Frederick A. Chase, salary....	\$	1,700 00	
		<u> </u>	\$ 1,700 00
Paid Sundry Persons, for ser-			
vices.....	\$	7,251 06	
		<u> </u>	7,251 06

Paid for BOOKS, PERIODI-
CALS, ETC.:

To D. Appleton & Co.....		6 00	
American Teck Book Co.....		32 00	
Henry J. Allyn & Co.....		52 50	
A. L. A. Publishing Section..		4 75	
Fred'k W. Bailey.....		1 50	
F. S. Blanchard & Co.....		1 50	
Balch Bros.....		27 00	
		<u> </u>	
<i>Amounts carried forward.....</i>	\$	125 25	\$ 8,951 06

<i>Amounts brought forward.....</i>	\$	125 25	\$	8,951 06
To P. Blackiston's Son's & Co.....		20 00		
Bradford, Rhodes & Co.....		5 00		
T. H. Castor & Co.....		66 38		
Assignees W. B. Clarke & Co..		491 83		
W. B. Clarke Co.....		988 55		
Cleveland Public Library.....		5 00		
Curtis & Cameron.....		5 00		
A. W. Elson & Co.....		10 35		
Helman Taylor Co.....		5 00		
Houghton, Mifflin & Co.....		25 00		
Walter S. Houghton.....		1 65		
C. A. Koehler & Co.....		2 40		
La Revue des Deux Frances...		4 00		
George E. Littlefield.....		12 90		
Little, Brown & Co.....		10 80		
MacMillan & Co.....		6 00		
S. Raymond Roberts, Treasurer		20 00		
Willard Small.....		7 25		
B. F. Stevens.....		395 60		
The Shakespeare Press.....		7 90		
The Florence Co.....		2 40		
Bradlee Whidden.....		15 00		
American Architect & Building News Co.		16 00		
Brentanos		2 50		
Library Bureau.....		60 06		
National Conference of Char- ities and Corrections.....		1 25		
Office Publisher's Weekly.....		11 50		
Sampson, Murdock & Co		15 00		
P. F. Van Everen.....		5 65		
Butterfield Printing and Bind- ing Co		350 50		
Courier-Citizen Co.....		15 00		
John Carter & Co.....		45 00		
Dumas & Co.....		389 90		
Thomas H. Lawler.....		90 82		
Lawler & Co		5 25		
McIndoe-Butterfield Co.....		152 00		
Morgan, Crossman & Co.....		1 35		
Morning Mail Co		12 00		
G. C. Prince & Son		631 14		
Union Printing Co.....		17 60		
				4,055 78
<i>Amount carried forward.....</i>	\$		\$	13,006 84

<i>Amount brought forward.....</i>		\$	13,006 84
Paid for SUNDRIES:			
To Appropriation for Water			
Works, for water.....	\$	13 50	
Lowell Electric Light Corp., for			
Lights.....		507 60	
Lowell Gas Light Co., for gas..		680 70	
N. E. Tel. & Teleg. Co., for ser-			
vice		8 08	
Fred'k A. Chase for sundry ex-			
penses		195 67	
V. G. Barnard, for stamps.....		24 00	
W. H. Gilman, for laundering			
towels		3 48	
F. H. Adams, for carpenter work		13 65	
A. N. Harmon, for repairing			
frames		2 23	
Charles E. Adams, for tapers..		72	
H. R. Barker Mfg. Co. for pipe,			
labor, etc		86 05	
Bartlett & Dow, for chimneys..		7 00	
George H. Bachelder, for man-			
tles.....		15 00	
Thomas Mather, for valve.....		88	
Robert B. Seeton, for repairs..		1 25	
C. Zimmer, for repairing lock..		1 00	
James R. Bailey, for paper....		137 99	
Boyd & Abbott Co., for ink			
holders		7 25	
Page Bros. & Co., for insurance			
of gas lamps.....		24 38	
E. F. Hathaway, for painting			
signs.....		1 20	
Charles E. Carter, for glue,			
cloth, mender, etc.....		59 84	
C. B. Coburn & Co., for borax,			
ammonia, dusters, etc.....		19 97	
Daniel Gage, for ice		1 14	
India Alkali Works, for savog-			
ran.....		23 75	
A. L. Kittredge & Co., for			
paste.....		30	
W. H. Spalding & Co., for			
paste.....		1 80	
M. E. Thompson, for lamp and			
soap.....		1 05	
Cook, Taylor & Co., for flannel.		1 80	
<i>Amounts carried forward.....</i>	\$	1,841 26	\$ 13,006 84

<i>Amounts brought forward</i>	\$	1,841 26	\$	13,006 84
To Murphy, Leavens & Co., for brushes.....		10 56		
O'Donnell & Gilbride Co, for crash.....		1 20		
B. & M. R. R., for transpor- tation.....		42		
Man. & Con. Ex. Co., for trans- portation....		2 25		
G. E. Stanley, for transportation		9 45		
Stone & Downer Co., for freight and insurance.....		9 44		
		<hr/>		<hr/>
				1,874 58
Total Expenditure for the year 1898.....			\$	14,881 42

1897 BILLS.

Paid for SUNDRIES :

To American Academy of Political and Social Science, for sub- scription.....	\$	2 50		
Bartlett & Dow, for chimneys.		9 00		
W. B. Clarke & Co., for books.....		67 84		
A. N. Harmon, for frames....		2 73		
Library Bureau, for cards....		2 02		
Thomas H. Lawler, for books and stationery... ..		21 89		
Lowell Gas Light Co., for gas..		20 30		
Lowell Electric Light Corp., for lights... ..		10 14		
Morning Mail Corp., for sub- scriptions.....		18 00		
Tucke & Parker, for lamps. . .		27 50		
C. Zimmer, for repairing lock..		2 00		
		<hr/>	\$	<hr/>
				183 92
			\$	<hr/>
				15,065 34
Balance to General Treasury Fund.....			\$	<hr/>
				124 72
			\$	<hr/>
				15,190 60

LIGHTING.

Annual Appropriation.....	\$	83,000 00	
Additional Appropriation.....		5,077 73	
		<u> </u>	\$ 88,077 73

EXPENDITURES.

Paid for LIGHTING PUBLIC BUILDINGS:

To Lowell Electric Light Corp.....	\$	1,119 12	
Lowell Gas Light Co.....		367 90	
		<u> </u>	\$ 1,487 02

Paid for LIGHTING STREETS:

To Sundry Persons, for labor....	\$	8,827 86	
		<u> </u>	8,827 86

Paid for SUNDRIES:

To Appropriation for Water Works, for water.....	\$	12 60	
N. E. Tel. & Teleg. Co., for service.....		30	
Globe Gas Light Co., for lighting.....		9,470 98	
Globe Gas Light Co., for lamp posts.....		100 00	
Lowell Gas Light Co., for gas..		6,330 60	
		<u> </u>	
<i>Amounts carried forward.....</i>	\$	15,914 48	\$ 10,314 88

Amounts brought forward..... \$ 15,914 48 \$ 10,314 88

To Lowell Electric Light Corp., for lights	57,399 18
Charles E. Adams, for alcohol, glass, paint, etc.....	76 56
Bartlett & Dow, for screws ...	40
H. R. Barker, Mf'g. Co., for gas cocks.....	18 75
A. Ivan Laughton, for repairs..	101 82
Thomas Mather, for fittings....	1 90
Pevey Bros., for lamp posts...	18 75
David A. Polley, for fitting frames.....	21 25
Ring & Co., for oil cans.....	72
Robert B. Seeton, for repairing valves.....	2 75
Thompson Hardware Co., for wrenches and glass.....	14 90
Wm. H. Wiggin, for hay and lamp posts.....	27 82
C. Crevier, for blacksmithing..	67 45
H. F. Ebert, for repairing harnesses.....	7 35
Fay Bros. & Hosford, for repairing carriages.....	109 00
C. H. Hanson, Jr., for halter...	1 15
Lowell Sun, for printing.....	2 45
Morning Mail Co., for printing.	7 20
G. C. Prince & Son, for stationery	10 46
Charles E. Robinson, for printing.....	1 60
A. G. Pollard & Co, for cotton waste.....	7 50
C. B. Coburn & Co., for alcohol turpentine, etc.....	120 06
Walter Coburn & Co., for cotton waste.....	4 25
A. L. Kittredge & Co., for oil and turpentine.....	4 13
Caleb L. Smith, for matches...	5 50
Thomas Manufacturing Co., for paint	2 77
D. W. Horne & Son, for coal..	11 27
E. A. Wilson, Agt., for coal...	11 88
E. A. and A. T. Smith, for concrete.....	3 50

Amounts carried forward..... 73,976 80 \$ 10,314 88

<i>Amounts brought forward</i>	\$ 73,976 80	\$ 10,314 88
To J. B. Cover & Co., for grain....	21 34	
C. H. Hanson & Co., for hay...	15 56	
Wm. E. Livingston, for oats...	5 30	
E. S. Sherman & Co., for oats..	21 72	
Fred W. Jenness, for pasturing horse.....	6 00	
C. H. Hanson & Co., for use of horse.....	23 25	
Charles R. Wood, for profes- sional services.....	2 50	
J. H. Sparks, for carriage hire..	3 00	
B. & M. R. R., for transporta- tion.....	32	
	<hr/>	\$ 74,075 79
Total Expenditure for the year 1898.....		\$ 84,390 67

1897 BILLS.

Paid for SUNDRIES:

To H. R. Barker Mfg. Co., for fit- tings.....	\$ 08	
Globe Gas Light Co., for light- ing.....	1,051 40	
Lowell Gas Light Co., for gas..	778 90	
Lowell Electric Light Corp., for lighting.....	1,747 35	
	<hr/>	\$ 3,577 73
		\$ 87,968 40
Balance to General Treasury Fund.....		109 33
		<hr/>
		\$ 88,077 73

LIQUOR LICENSES.

Annual Appropriation.....	\$	38,339 00	
Additional Appropriation.....		899 50	
		<hr/>	\$ 39,238 50

EXPENDITURES.

Paid for SUNDRIES :

To Commonwealth of Massachusetts, 25 per cent. of liquor license fees for 1898.....	\$	38,613 50	
Est. J. F. Prescott, for 25-72 of liquor license fees of 1897, as per resolution of City Council		625 00	
		<hr/>	
Total Expenditure for the year 1898.....			\$ 39,238 50

**LOWELL AND TYNGSBOROUGH
HIGHWAY.**

Appropriation	\$	2,543 41	
		<u> </u>	\$ <u>2,543 41</u>

Paid County of Middlesex.....	\$	2,543 41	
		<u> </u>	\$ <u>2,543 41</u>

LOWELL TEXTILE SCHOOL.

Appropriated from Geneneral Treas- ury Fund	\$	5,000 00	\$	5,000 00
		<u> </u>		<u> </u>

Paid Trustees Lowell Textile School	\$	5,000 00	\$	5,000 00
		<u> </u>		<u> </u>

MAYOR'S DEPARTMENT

Annual Appropriation.....	\$	5,000 00	
Additional Appropriation.....		51 07	
		<u> </u>	\$ 5,051 07

RECEIPTS.

From Appropriation for Commons, for railroad tickets.....	\$	1 72	
Appropriation for Incidentals, for services of clerk.....		17 94	
Appropriation for Sewer De- partment, for railroad tickets		14 52	
Appropriation for Soldiers' and Sailors' Memorial Tablets, for railroad tick- ets		8 51	
		<u> </u>	\$ 42 69
			<u>\$ 5,093 76</u>

EXPENDITURES.

Paid James W. Bennett, Mayor, salary	\$	3,000 00	
		<u> </u>	\$ 3,000 00
<i>Amount carried forward.....</i>			<u>\$ 3,000 00</u>

Amount brought forward..... \$ 3,000 00

Paid for SUNDRIES:

To Frank W. Hall, Private Secretary.....	\$ 1,200 00
Appropriation for Incidentals, for report of Assessors' Investigating Committee....	5 60
Appropriation for Law Department, for services of Malcolm M. Currier.....	12 00
N. E. Tel. and Teleg. Co., for service.....	37 08
J. W. Bennett, for telegram...	47
V. G. Barnard, for stamps.....	13 00
Mary C Brennan, for services..	53 70
Postal Telegraph and Cable Co., for service.....	55
W. U. Telegraph Co., for telegrams	1 09
Ballard & Kirschbaum, for rent of telephone index.....	1 00
J. A. Cline, for maps... ..	5 75
Courier-Citizen Co., for printing advertising and subscription	60 35
Hutchins Rubber Type Foundry, for stamps.....	1 65
Thomas H. Lawler, for stationery and stamps.....	26 60
Morning Mail Co., for printing, advertising and subscription....	64 00
G. C. Prince & Son, for stationery.....	3 50
Charles E. Robinson, for printing.....	2 25
F. E. Rollins, for note books...	1 25
Sampson, Murdock & Co., for directory	2 00
Smith Premier Typewriting Co. for ribbon	50
Tilton & Co., for stationery....	4 50
Union Printing Co., for printing.....	5 95
Vox Populi Press, for printing.	11 95
M. G. Wight & Co., for paper..	1 50
C. K. Miller, for trip ticket....	20 25

Amounts carried forward..... \$ 1,536 49 \$ 3,000 00

Amounts brought forward..... \$ 1,536 49 \$ 3,000 00

To Charles A. Stott, for Expenses of Committee for Examination of Candidates for In- spector of Electric Wires..	2 75	
J. V. Keyes & Co., for cotton cloth.....	45	
C. I. W. Maynard Co., for pin cushions.....	46	
F. G. Mitchell & Co., for jardi- niers and pedestals.....	30 90	
Wm. H. Pearson, for brush, comb, etc.....	1 25	
Bartlett & Dow, for shears....	42	
Weir Electric Co., for labor and material....	5 96	
B. & M. R. R. Tickets, for tick- ets.....	40 25	
Morse Coach Co., for carriage hire.....	70	
J. H. Sparks, for carriage hire.	21 00	
	<hr/>	\$ 1,640 63
Total Expenditure for the year 1868.....		<hr/> \$ 4,640 63

1897 BILLS.

Paid for SUNDRIES :

To Hutchins Rubber Type Foun- dry, for stamps.....	\$ 2 90	
Lowell Daily News, for subscrip- tion.....	3 00	
Morning Mail Corp., for sub- scription.....	6 00	
N. E. Tel. & Teleg. Co., for ser- vice.....	11 17	
G. C. Prince & Son, for sub- scription.....	6 00	
J. S. Sparks, for carriage hire..	22 00	
	<hr/>	\$ 51 07
		<hr/> \$ 4,691 70
Balance to General Treasury Fund.....		\$ 402 06
		<hr/> \$ 5,093 76

MILITARY AID.

Annual Appropriation.....	\$	7,300 00		
		<u> </u>	\$	7,300 00
Received from Sundry Persons, cash returned to Treasury.	\$	25 00		
		<u> </u>	\$	25 00
			\$	<u>7,325 00</u>
Paid Sundry Persons, Military Aid for 1898.....	\$	6,525 00		
		<u> </u>	\$	6,525 00
Balance to General Treasury Fund.....			\$	800 00
			\$	<u>7,325 00</u>
				<u> </u>

NEW SCHOOL HOUSES.

Balance Undrawn, Jan. 1, 1898....	\$	2,000 00	
		<u> </u>	\$ 2,000 00
			<u> </u>

TRANSFERS.

To Appropriation for Bartlett			
School House.....	\$	1,000 00	
Appropriation for Carter Street			
School House.....		<u>1,000 00</u>	
			\$ 2,000 00
			<u> </u>
			<u> </u>

OBSERVANCE OF LABOR DAY.

Appropriated from General Treasury Fund.....	\$ 400 00	
	<u> </u>	<u>\$ 400 00</u>

EXPENDITURES.

Paid for SUNDRIES :

To Borjes Military Band	60 00	
Bamber's Flute Band.....	20 00	
Lowell Cadet Band.....	75 00	
Lowell Military Band.....	100 00	
National Band.....	66 00	
Loom Fixers Union, prize.....	10 00	
Leather Workers Union, prize.	10 00	
Trades and Labor Council, prize	10 00	
Lowell Bill Posting Co., for Posting.....	4 50	
F. A. M. Tobin, for printing...	36 50	
P. McNulty, for carriage hire..	4 00	
James E. O'Donnell, for car- riage hire.....	4 00	
	<u> </u>	<u>\$ 400 00</u>

PAUPER DEPARTMENT, ALMSHOUSE.

Annual Appropriation.....	\$	45,000 00		
Additional Appropriation.....		2,151 34		
		2,151 34	\$	47,151 34

RECEIPTS.

From Appropriation for Pauper Department, Out Door Relief, for provisions and fuel.....	\$	12,258 50		
Appropriation for Schools, for wood.....		549 01		
Leighton Bros., overdraft....		10 00		
Merrimack Clothing Co., for overdraft		4 00		
		12,821 51	\$	12,821 51
			\$	59,972 85

EXPENDITURES.

Paid SUPERINTENDENT:

To Albert Pindar, salary.....	\$	2,033 08		
		2,033 08	\$	2,033 08
<i>Amount carried forward.....</i>			\$	2,033 08

Amount brought forward..... \$ 2,033 08

Paid CITY PHYSICIAN:

To Thomas B. Smith, salary.....	545 67	
W. M. Jones, salary.....	143 00	
	<hr/>	688 67

Paid Sundry persons, for labor.....	\$ 8,977 83	
	<hr/>	8,977 83

Paid for FUEL:

To Daniel Gage.....	\$ 4,398 40	
William E. Livingston.....	2 46	
Taylor & Barker.....	4 20	
	<hr/>	4,405 06

**Paid for GRAIN, GROCERIES,
PROVISIONS, etc.:**

To J. B. Cover & Co	\$ 169 82	
G. M. Foster.....	456 82	
Wm. E. Livingston.....	2,629 73	
James Meek.....	165 20	
T. J. McDonald.....	17 30	
E. S. Sherman & Co.....	106 15	
E. N. Wood & Co.....	330 11	
F. M. Bill & Co.....	1,246 60	
G. J. & D. Bradt.....	303 90	
Bradbury & Co	185 12	
Calderwood & Robbins.....	27 00	
Coffey Bros	3,552 12	
C. G. Coburn... ..	179 82	
H. J. G. Croswell.....	56 25	
S. K. Dexter.....	577 03	
Dickson Bros	1,147 07	
Donovan & Co.....	486 24	
Daniel Gage.....	510 86	
W. H. I. Hayes.....	269 18	
Martin L. Hall & Co.....	302 40	
Haynes, Hanchett & Co	54 43	
W. A. Ingham & Co.....	70 00	
Kilpartrick Bros.....	16 83	
John F. Leland.....	7 00	
A. McDonald.....	1 20	
Wm. Nichols & Co.....	39 67	
H. E. Noyes & Son.....	806 85	
Oakdale Manufacturing Co....	403 00	
	<hr/>	

<i>Amounts carried forward</i>	\$ 14,117 40	\$ 16,104 64
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<i>Amounts brought forward</i>	\$	14,117 40	\$	16,104 64
To George E. Putnam.....		872 90		
J. & J. M. Pearsou.....		15 00		
O. B. Ranlett.....		404 13		
Simpson & Rowland.....		73 10		
Caleb L. Smith.....		588 93		
F. H. Stratton.....		173 49		
Armour & Co.....		282 71		
L. W. Hall & Co.....		775 06		
Keefe Bros		4,887 15		
Swift & Bailey.....		1,342 08		
Swift & Co.....		294 00		
T. M. O'Neil & Co.....		844 61		
D. E. Roach.....		355 03		
Charles W. Wilder.....		162 50		
T. I. Reed.....		9 50		
C. N. Allen.....		299 02		
Caswell, Livermore & Co.....		71 60		
George M. Teel.....		245 10		
B. F. Witham.....		705 60		
Fleischman & Co.....		85 50		
		<hr/>		26,604 41

Paid for CLOTHING, DRY
GOODS, etc.:

To S. Abels.....	\$	12 96		
Bon Marche Dry Goods Co....		36 17		
Willard A. Brown.....		69 11		
J. L. Chalifoux.....		105 46		
John J. Ciuin		3 75		
Cook, Taylor & Co.....		656 04		
Lawrence Manufacturing Co..		75 50		
Lowell Rubber Co		51 29		
Merrimack Clothing Co.....		2 00		
O'Donnell & Gilbride Co.....		331 80		
O'Sullivan Bros		57 60		
A. G. Pollard & Co.....		204 85		
Putnam & Son		189 80		
Shaw Stocking Co.....		94 00		
E. D. Steele & Co.....		225 19		
Talbot Clothing Co.....		12 75		
		<hr/>		2,128 27

Paid for DRUGS, MED I-
CINES, etc.:

To F. H. Butler & Co.....	\$	37 15		
<i>Amounts carried forward</i>	\$	37 15	\$	44,837 32

<i>Amounts brought forward</i>	\$	37 15	\$	44,837 32
To Charles E. Carter.....		205 05		
Carleton & Hovey.....		1 35		
Ellingwood & Co.....		99 34		
John Lennon.....		66 65		
Wm. H. Pearson.....		113 95		
John M. Pevey.....		125 71		
M. E. Thompson.....		45 55		
				<hr/>
				694 75

Paid for SUNDRIES AT WOOD
YARD:

To Sundry persons, for labor.....	\$	1,198 00		
Daniel Gage, for coal.....		853 59		
Alfred Leblanc, for wood.....		1,015 55		
J. F. Sweetser, for wood.....		579 00		
Leighton Bros., for baskets....		23 50		
J. H. Swett, for repairing wagon		14 00		
				<hr/>
				3,683 64

Paid for SUNDRIES:

To Appropriation for Engineering, for engineering.....	\$	25 63		
Appropriation for Public Build- ings, for labor and material		95 05		
Appropriation for Water Works, for water.....		908 58		
Albert Pinder, for sundry ex- penses.....		38 40		
Lowell Gas Light Co., for gas..		961 90		
N. E. Tel. & Teleg. Co., for ser- vice.....		121 23		
A. P. Bateman, for lumber....		11 00		
A. L. Brooks & Co., for lumber		14 82		
Burnham & Davis for lumber..		5 20		
Pratt & Forrest, for lumber...		62 30		
Amasa Pratt & Co., for lumber.		76 84		
William H. Wiggin, for lumber.		202 11		
Charles E. Adams, for hardware		85 34		
W. T. S. Bartlett, for hardware		7 45		
Bartlett & Dow, for hardware.		163 42		
Boutwell Bros., for iron.....		73		
H. B. Shattuck & Son, for hard- ware		72 64		
				<hr/>
<i>Amounts carried forward</i>	\$	2,852 64	\$	49,215 71

<i>Amounts brought forward</i>	\$ 2,852 64	\$ 49,215 71
To Thompson Hardware Co., for hardware.....	22 30	
H. R. Barker Mfg. Co., for faucets	7 92	
John Callaghan, for tin boxes..	12 00	
Coggeshall & Hicks, for tube scraper.....	3 00	
Crawford Laundry and Machinery Co., for repairs....	16 15	
Deane Steam Pump Co., for supply pump.....	32 87	
Lock Regulator Co., for valve and express.....	3 15	
Thomas Mather, for pipe, fittings and labor.....	1 71	
Middlesex Machine Co., for pipe and fittings.....	20 19	
Rice & Company, for wire cloth	4 50	
O. A. Richardson's Sons, for filing saws	2 85	
Scannell & Wholey, for plates and castings.....	24 75	
Scott & O'Day, for pipe, fittings and labor.....	147 22	
Sweeney & Welch, for pipe, fittings and labor.....	93 22	
The Fairbanks Co. for scales..	8 50	
H. H. Wilder & Co., for copper, tin, labor, etc.....	92 26	
American & Continental Sanitary Company, Limited, for creoside.....	4 50	
Billings, King & Co., for paint.	13 50	
C. B. Coburn & Co., for ammonia, japan, paint, etc...	401 10	
Columbian Insecticide Co., for Columbian Liquid, and contract for exterminating insects.....	160 00	
Crystal Oil Co., for oil.....	9 92	
W. A. Dickinson, for soap....	280 70	
F. J. Flemings, for paper bags.	10 79	
Gould Packing Co., for packing.....	1 43	
C. W. Learned, for disinfectant.	20 00	
Talbot & Co., for Ta-bo.....	3 00	
<i>Amounts carried forward</i>	\$ 4,250 17	\$ 49,215 71

<i>Amounts brought forward</i>	\$	4,250 17	\$	49,215 71
To Talbot Dyewood & Chemical Co., for ammonia.....		126 14		
The Providence Sizing Co., for soap.....		8 90		
Philip Ginty, for slate, zinc and labor.....		7 00		
F. O. White & Co, for mason work and material.....		18 70		
E. A. Wilson, Agt., for cement and lime.....		37 58		
John J. Cluin, for repairing clock.....		1 00		
Leighton Bros., for crockery and glass ware.....		18 96		
The Crosby Invalid Furniture Co., for bedstead and mat- tress.....		35 03		
Whittier Cotton Mills, for sash cord.....		4 31		
M. L. Bassett & Co., for paper.		31 14		
J. E. Buerk, for dials.....		3 60		
Courier-Citizen Co., for book and subscription....		7 75		
Thomas H. Lawler, for station- ery.....		3 70		
Lowell Daily News, for sub- scription.....		3 00		
G. C. Prince & Son, for station- ery.....		7 30		
Sampson, Murdock & Co., for directory.....		2 00		
F. A. M. Tobin, for printing....		2 49		
Wm. Whitmore, for brushes, ink and stencils.....		8 41		
Wm. Henry Maule, for seeds..		29 85		
George Wright, for trees.....		2 00		
V. G. Barnard, for stamps.....		14 00		
H. C. Church & Son, for insur- ance.....		80 62		
Thomas C. Lee & Co., for insur- ance.....		300 00		
Town of Chelmsford, for taxes.		48 40		
George F. Allen, for repairing harnesses.....		43 60		
Archibald Wheel Co., for nuts..		3 00		
J. C. Donovan, for harness dressing.....		4 20		
<i>Amounts carried forward</i>	\$	5,102 85	\$	49,215 71

<i>Amounts brought forward</i>	\$	5,102 85	\$	49,215 71
To H. F. Ebert, for repairing harnesses		11 98		
M. V. B. Libbey, for shoeing horses		138 00		
J. H. Swett, for repairing carriages.....		107 98		
John H. Winters, for repairing carriages		9 90		
Joseph Wozencroft, for blacksmithing.....		1 25		
George T. Woodward, for labor		15 00		
Charles E. Munn, for professional services.....		8 00		
Charles R. Wood, for professional services.....		24 00		
George W. McIntire, for pasturing cattle.....		20 00		
Henry S. Perham, for making cider.....		14 62		
American Express Co., for transportation		25		
B. & M. R. R., for transportation		25 42		
N. Y. & B. Des. Ex. Co., for transportation		25		
N. Y., N. H. & H. R. R. Co., for transportation		4 98		
G. E. Stanley, for transportation		2 00		
		<hr/>	\$	5,486 48
Total Expenditure for the year 1898.....			\$	54,702 19

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Water Works, for water.....	\$	244 26		
H. C. Church & Son, for insurance		751 81		
F. and E. Bailey & Co., for iatrol.....		1 10		
		<hr/>		
<i>Amounts carried forward</i>	\$	997 17	\$	54,702 19

Amounts brought forward..... \$ 997 17 \$ 54,702 19

To Lowell Scale Co., for repairing scales	6 00	
D. E. Roche, for provisions....	151 59	
Fred Theise, for baskets.....	36 00	
C. M. Allen, for fish.....	17 00	
B. and M. R. R., for transportation	2 30	
Richard Bray, for services.....	10 00	
C. F. Blanchard, for creoline...	70	
C. B. Coburn & Co., for brushes and disinfectant	10 88	
Carleton & Hovey, for medicine.....	10 50	
Cook, Taylor & Co., for cloth..	125 86	
Coffey Bros., for flour.....	25 50	
Fleischman & Co., for yeast...	8 70	
F. J. Fleming, for bags and paper	35 31	
Daniel Gage, for ice.....	43 00	
C. H. Hanson, Jr., for blankets.	16 50	
Ingham Bros., for killing hogs..	18 00	
Keefe Bros., for beef.....	216 32	
Lowell Gas Light Co., for gas..	29 30	
Wm. E. Livingston, for oats...	117 60	
M. V. B. Libbey, for shoeing horses.....	19 60	
N. E. Tel. & Teleg. Co., for services	6 54	
A. G. Pollard & Co., for dry goods... ..	33 03	
Simpson & Rowland, for matches	170 80	
J. H. Swett, for repairing carriages	3 40	
George M. Teel, for fish.....	13 94	
Thompson Hardware Co., for brushes	4 80	
J. M. Washburn, for bed pans.	7 50	
H. H. Wilder & Co., for grates and linings.....	13 50	
		2,151 34
		\$ 56,853 53
Balance to General Treasury Fund		\$ 3,119 32
		\$ 59,972 85

PAUPER DEPARTMENT, OUT DOOR-RELIEF.

Annual Appropriation.....	\$	35,000 00		
Additional Appropriation.....		17,055 83		
		<hr/>	\$	52,055 83
Received from Appropriation for Incidentals, for railroad tickets..	\$	10 90		
		<hr/>	\$	10 90
			\$	<hr/> 52,066 73 <hr/>

EXPENDITURES.

SECRETARY'S OFFICE:

To Martin J. Courtney, secretary..	\$	1,500 00
James F. Walsh, Clerk.....		1,219 53
Nellie A. Keyes, Clerk.....		795 00
Martin J. Courtney, for sundry expenses.....		149 36
N. E. Tel. and Teleg. Co., for service.....		55 85
W. U. Teleg. Co., for telegrams		1 13
Ballard and Kirschbaum, for rent of telephone index:...		1 00
B. & M. R. R. Tickets, for tickets		204 61
C. K. Miller, for tickets.....		8 84
George O. White, for tickets...		34 00
V. G. Barnard, for stamps.....		15 00
John Barnes, for printing.....		4 90
		<hr/>
Amount carried forward.....	\$	3,989 22

Amount brought forward \$ 3,989 25

To Bates Manufacturing Co., for numbering machine.....	16 00
F. S. Blanchard & Co., for Mass-year book.....	1 50
Couries-Citizen Co., for book...	1 75
Thomas H. Lawler, for stationery and stamps.....	20 60
Lowell Daily Sun, for blank books.....	19 70
Lyon Platinum, Pen. Co., for pens.....	3 25
Morning Mail Co., for printing.	3 25
G. C. Prince & Son, for stationery.....	52
Sampson, Murdock & Co., for directory.....	2 00
Smith, Premier Typewriter Co., for repairing typewriter.....	4 60
F. A. M. Tobin, for printing..	1 75
Union Printing Co., for printing.....	20 10
Vox Populi Press, for printing.	28 00
M. G. Wight & Co., for printing.....	9 10
A. H. Cluer, for harness.....	25 00
Henry Reynolds, for shoeing horse.....	13 30
Sawyer Carriage Co., for repairing carriages....	26 41
Dennis Mahan, for labor.....	3 00
James E. O'Donnell, for carriage hire.....	12 00
J. H. Sparks, for medicine.....	4 00
American Express Co., for transportation.....	30

4,205 35

Paid for AID RENDERED
OUT OF ALMSHOUSE :

To Samuel Amadon.....	30 00
Margaret Austin.....	101 73
Mrs. Patrick J. Cassidy.....	60 00
Irene Cinqmare.....	19 28
Catherine Cummiskey.....	96 00
Louise Denault.....	91 25

Amounts carried forward..... \$ 398 26 \$ 4,205 35

<i>Amounts brought forward</i>	\$	398 26	\$	4,205 35
To Mrs. S. M. Dickey.....		102 00		
Mrs. Felix Donnelly.....		60 00		
Margaret Fezette.....		96 00		
Charles E. Guthrie.....		45 85		
Patrick Hand.....		125 00		
E. C. Hathaway.....		1 50		
Mrs. William W. Ingalls.....		56 00		
Rose Kiernan.....		120 00		
Mary Lahiff.....		60 00		
Mrs. James Lavelle.....		96 00		
Charles McDermott.....		96 00		
Charles F. Melvin.....		41 00		
Emily McNamara.....		7 50		
Patrick Murphy.....		96 00		
Michael Murphy.....		72 00		
Ann Murray.....		36 00		
Mrs. Frank Nason.....		60 58		
Winnifred O'Byrne.....		72 00		
Mrs. Adam Ort.....		60 00		
Mary Quigley.....		4 00		
Charles Riley.....		84 00		
Mary F. Riley.....		60 00		
Frances A. Roberts.....		120 00		
Catherine Taylor.....		44 00		
Mary Tenary.....		65 22		
Ellen Tully.....		84 00		
Minerva White.....		60 00		
Lydia G. Whitten.....		84 00		
Ella Witherell.....		60 00		
Thomas Varnum.....		80 00		
Thomas H. Elliott.....		30 00		
Daniel J. Manning.....		48 00		
Mrs. Charles C. Tedford.....		50 00		
Ann Sullivan.....		47 13		
Paris K. Taylor.....		43 72		
				<hr/>
				2,665 76

Paid for PROVISIONS, FUEL,
etc., on orders :

To P. F. Allen.....	\$	63 00
John H. Burke & Co.....		3 00
Banner Market.....		66 00
C. H. Boisvert.....		9 00
Buttrick & Co.....		3 00
Broadway Cash Market.....		3 00
Fred M. Barney & Co.....		36 00

Amounts carried forward..... \$ 183 00 \$ 6,871 11

<i>Amounts brought forward</i>	\$	183 00	\$	6,871 11
To Barrett Bros		66 00		
James J. Courtney.....		113 00		
J. H. Corbett & Co.....		9 00		
Michael Corbett.....		69 00		
Coffey & Co.....		38 86		
Donovan & Co.....		18 00		
D. J. Donovan.....		9 00		
Winthrop Foss.....		4 00		
Greenwood Bros.....		2 99		
David Gerow..		14 00		
J. J. Kelly		28 00		
P. Keyes, Jr.....		29 94		
Keefe Bros		26 25		
P. J. Linnehan.....		22 00		
George Lynch.....		14 00		
Lindsay Bros.....		6 00		
H. W. Locke.....		3 00		
Ed. Martin.....		108 00		
F. J. McCarthy.....		3 00		
Richard McCluskey.....		34 51		
T. F. McSorley....		59 00		
Melloon's Cash Market.....		40 00		
N. E. Market.....		139 22		
T. M. O'Neill & Co.....		105 00		
Public Market & Packing Co..		18 00		
James S. Roark.....		27 00		
Stanley & Co.....		6 75		
G. E. Soper.....		18 00		
E. Soper & Co.....		6 00		
P. P. Stiles & Co.....		4 75		
Stiles & Co.....		36 00		
Standard Grocery & Provision Co		9 00		
Taylor & Thompson.....		14 00		
M. A. Taylor		18 00		
Union Market		3 00		
Mrs. S. D. Whittemore.....		66 00		
Bon Marche.....		2 61		
Boulger Shoe Co.....		5 50		
J. L. Chalifoux.....		3 50		
Merrimack Clothing Co.....		9 15		
O'Donnell & Gilbride Co.....		2 00		
O'Sullivan Bros.....		38 00		
Appropriation for Paupers.....		12,258 50		
		<hr/>	\$	13,690 53
<i>Amount carried forward</i>				<hr/> 20,561 54

Amount brought forward... . \$ 20,561 64

Paid on account of AMBU-
LANCE:

To Joseph Ashworth, Driver.....	\$ 690 00
Hugh Armstrong, Driver.....	795 00
George B. McKenna, Driver...	795 00
David Ready, Driver.....	105 00
Charles H. Ricker, Surgeon.....	50 00
Mrs. Charles H. Ricker, for ser- vices of Charles H. Ricker.	25 00
Fred G. Burnham, Surgeon....	461 25
Appropriation for Water Works, for water.....	18 00
N. E. Tel. & Teleg. Co., for rent of private line.....	20 00
N. E. Tel. & Teleg. Co., for ser- vice	125 06
Charles E. Adams, for rake, broom, sponge, chamois skin, etc.....	6 89
Bartlett & Dow, for hose.....	6 00
W. T. S. Bartlett for mop, handle and rope.....	1 45
Thompson Hardware Co., for rivets	25
Scott & O'Day, for burners and labor	3 90
A. N. Armitstead & Son, for re- pairing rubber boots	2 00
John Cross, for canvass stretch- ers.....	10 00
Highland Steam Laundry, for laundering	26 31
Lowell Rubber Co., for blankets	4 00
C. B. Coburn & Co., for oil, can, etc.....	4 25
Crystal Oil Co., for oil.....	1 39
Daniel Gage, for ice.....	1 44
Caleb L. Smith, for soap.....	1 00
D. W. Horne & Son, for coal...	23 48
J. B. Cover & Co., for straw...	56 05
G. M. Foster, for hay.....	133 82
Wm. E. Livingston, for grain..	35 01
E. S. Sherman & Co., for grain.	44 41
E. N. Wood & Co., for oats....	35 49

Amounts carried forward..... \$ 3,481 45 \$ 20,561 64

<i>Amounts brought forward</i>	\$	3,481 45	\$	20,561 64
To A. H. Cluer, for currycomb, brushes and repairing har- ness.		8 50		
Cornelius Desmond, Agt., for shoeing.		13 30		
O. K. Dexter, for shoeing.		73 49		
F. J. Doherty, for painting am- bulance.		48 50		
J. C. Donovan, for repairing harnesses.		22 85		
H. F. Ebert, for medicine and whips.		7 35		
Charles H. Hill, for repairing ambulance.		15 65		
Edwin Sanborn, for repairing ambulance.		135 60		
Sawyer Carriage Co., for re- pairing ambulance.		72 82		
Robert B. Seeton, for repairing harness holders.		24 00		
Charles E. Munn, for profes- sional services.		2 00		
A. H. McCann, for professional services.		6 00		
American Express Co., for transportation.		90		
		<hr/>		3,912 41

Paid on account of DISPEN-
SARY:

To John F. Boyle, clerk.	\$	102 00		
Austin A. Keith, clerk.		799 00		
F. H. Butler & Co., for medi- cine.		64 60		
Carleton & Hovey, for medi- cine.		3 05		
Charles E. Carter, for medicine.		28 75		
Ellingwood & Co., for medi- cine.		16 18		
R. J. Lang & Co., for medi- cine.		1 40		
Eli Lilley & Co., for medicine.		30 00		
Wm. H. Pearson, for medicine.		25 00		
M. E. Thompson, for medicine.		149 70		
Armour & Co., for lard.		1 50		
		<hr/>		
<i>Amounts carried forward</i>	\$	1,221 18	\$	24,474 05

<i>Amounts brought forward</i>	\$	1,221 18	\$	24,474 05
To C. B. Coburn & Co., for alcohol, cod liver oil, corks, gela- tine, etc.....		133 05		
Hutchins Rubber Type Foun- dry, for labels.....		3 00		
Thomas H. Lawler, for station- ery.....		6 00		
Sampson, Murdock & Co., for directory.....		2 00		
Simpson & Rowland, for sugar.		18 83		
		<hr/>		1,384 06

Paid for SERVICES OF PHY-
SICIANS:

To Frederick G. Burnham.....	\$	5 94		
Pierre Brunelle.....		154 29		
W. G. Eaton.....		190 26		
Charles M. Frye.....		185 25		
James B. Field.		3 00		
A. J. Halpin.....		325 27		
Wm. A. Johnson.....		191 26		
L. J. McDonough.....		243 26		
Charles H. Ricker.....		33 34		
Mrs. Charles H. Ricker		18 66		
J. B. Wentworth.....		3 00		
		<hr/>		1,353 53

Paid for COFFINS, INTER-
MENTS, etc.:

To Appropriation for Public Build- ings.....	\$	551 00		
Joseph Albert.....		55 00		
Amedee Archambault.....		40 00		
Charles H. Molloy.....		76 00		
James F. O'Donnell.....		41 00		
W. Renaud.....		9 00		
John F. Rogers.....		3 00		
Peter H. Savage.....		57 00		
John A. Weinbeck.....		6 00		
C. M. Young & Co.....		8 00		
		<hr/>	\$	846 00
<i>Amount carried forward</i>			\$	28,057,64

Amount brought forward..... \$ 28,057 64

Paid for SUPPORT of SUNDRY
PERSONS out of ALMS-
HOUSE:

To Commonwealth of Massachu-
setts, for support of sundry
persons:

In Danvers Lunatic Hospi- tal.....	\$199 18	
Hospital for Dipsoma- niacs.....	20 89	
School for Feeble Mind- ed	207 54	
State Almshouse.....	396 17	
State Farm.....	873 60	
Taunton Lunatic Hos- pital	56 64	
Westborough Insane Asylum.....	17 18	
Worcester Lunatic Hospital	544 14	
	<hr/>	2,315 34

To Boston Children's Aid Society.....	88 23	
Danvers Lunatic Hospital.....	1,822 78	
Hospital Cottages, for Children.....	126 74	
Lowell Hospital Association.....	98 29	
Lawrence General Hospital.....	97 14	
Lowell General Hospital.....	105 20	
Massachusetts Hospital for Ep- ileptics.....	113 75	
Massachusetts School for Feeble Minded.....	550 60	
Medfield Insane Asylum.....	2,155 85	
Northampton Lunatic Hospital.....	70 11	
Perkins Institution and Massa- chusetts School for the blind.....	47 30	
St. John's Hospital.....	2,861 10	
St. Peter's Orphanage.....	851 93	
Sisters of Charity, Lawrence....	74 22	
Sisters of Charity, Salem.....	278 57	
State Board of Lunacy and Charity.....	30 50	
Taunton Lunatic Hospital.....	78 18	
	<hr/>	

Amounts carried forward..... \$ 11,765 83 \$ 28,057 64

<i>Amounts brought forward</i>	\$	11,765 83	\$	28,057 64
Westborough Insane Asylum..		352 78		
Worcester Insane Asylum....		380 24		
Worcester Lunatic Hospital...		3,644 26		
		<hr/>	\$	16,143 11

Paid Cities and Towns, for AID
RENDERED SUNDRY
PERSONS, as follows :

To City of Boston.....	\$	381 09		
Beverly.....		146 00		
Cambridge....		2 70		
Chelsea.....		3 00		
Everett.....		10 00		
Fall River.....		12 55		
Fitchburg.....		78 58		
Lawrence ..		86 65		
Lynn.....		102 90		
Malden....		133 79		
North Adams.....		16 74		
Newton		20 00		
Salem.....		94 97		
Somerville.....		73 15		
Springfield ..		106 00		
Waltham.....		12 81		
Worcester....		101 75		
		<hr/>	\$	
Town of Andover		6 00		
Billerica		73 19		
Chelmsford.....		61 85		
Methuen.....		23 25		
Orange		3 84		
Saugus.....		15 00		
Wareham.....		13 75		
Watertown.....		18 30		
Westford		40 50		
		<hr/>	\$	1,638 39

Paid for SUNDRIES :

To Martin J. Courtney, for sundry expenses.....	\$	8 15		
Ellingwood & Co., for truss....		5 00		
Dumas & Co., for blank books..		3 90		
Hutchins Rubber Type Foundry for stamp.....		20		
		<hr/>		
<i>Amounts carried forward</i>	\$	17 25	\$	45,839 14

<i>Amounts brought forward</i>	\$	17 25	\$	45,839 14
To N. E. Tel. & Teleg. Co., for service.....		101 67		
D. F. Lyons, for teaming.....		3 00		
J. H. Sparks, for carriage hire..		10 00		
		<hr/>	\$	131 92
Total Expenditure for the year 1898.....			\$	<hr/> 45,971 06

1897 BILLS.

Paid for SUNDRIES :

To Amedee Archambault, for interments.....	\$	9 00	
Joseph Albert, for interments...		9 00	
Allen Bros., for provisions. ...		9 00	
Armour & Co., for lard.....		65	
F. M. Barney & Co., for provisions		3 00	
T. M. Bolton, for blanket.....		4 35	
James J. Courtney, for provisions		6 00	
C. B. Coburn & Co., for corks and naphtha		3 62	
Coffey & Co., for provisions....		11 00	
Commonwealth of Massachusetts, for aid.....		1,964 80	

Cities and Towns, for aid rendered as follows :

Boston	113 22
Beverly	85 44
Chelsea.....	72 50
Fall River.. ..	79 35
Fitchburg.....	5 25
Haverhill	70 54
Holyoke.....	26 66
Lawrence.....	9 25
Lynn	97 00
Salem	46 90
Somerville	15 00
Waltham.....	4 35

<i>Amounts carried forward</i>	\$	2,645 88	\$	45,971 06
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<i>Amounts brought forward</i>	\$	2,645 88	\$	45,971 06
To Worcester.....		10 52		
Avon.....		158 00		
Chelmsford.....		13 07		
Methuen.....		42 00		
Plymouth.....		2 00		
Danvers Lunatic Hospital, for aid.....		555 28		
Hospital Cottages for Children, for aid.....		85 42		
Lowell Hospital Association, for aid.....		33 15		
Medfield Insane Asylum, for aid.....		699 20		
Northampton Lunatic Hospital, for aid.....		42 71		
Sisters of Charity, Lawrence, for aid.....		24 00		
Sisters of Charity, Salem, for aid		97 50		
St. John's Hospital, for aid....		138 71		
Worcester Insane Asylum, for aid....		128 14		
Worcester Lunatic Hospital for aid ..		975 18		
Westborough Insane Hospital..		128 14		
O. K. Dexter, for shoeing horses.....		11 50		
J. C. Donovan, for repairing harnesses.....		5 45		
Ellingwood & Co., for medi- cine.....		67		
Highland Steam Laundry, for laundering....		2 44		
P. Keyes, Jr., for groceries.....		5 00		
John J. Kelley, for grocer- ies.....		10 00		
T. J. Linnehan, for groceries...		2 00		
George Lynch, for groceries...		2 00		
Merrimack Clothing Co., for clothing..		4 00		
Ed. Martin, for groceries.....		9 00		
Melloon's Cash Market, for pro- visions		8 00		
Richard McCluskey, for gro- ceries		1 49		
L. J. McDonough, for profes- sional services.....		35 00		
<i>Amounts carried forward</i>	\$	5,875 45	\$	45,971 06

<i>Amounts brought forward.....</i>	\$	5,875 45	\$	45,971 06
To J. H. McDermott, for inter- ments.....		18 00		
N. E. Market for provisions....		3 00		
N. E. Tel. and Teleg. Co., for service.....		26 61		
James F. O'Donnell, for inter- ments.....		10 00		
O'Sullivan Bros., for shoes.....		9 25		
T. M. O'Neil & Co., for provis- ions		15 00		
Public Market & Packing Co., for provisions.....		6 00		
James S. Roark, for provisions.		3 00		
Sawyer Carriage Co., for repair- ing carriages.....		80 52		
M. A. Taylor, for groceries....		3 00		
M. Veevers, for groceries.....		3 00		
Mrs. S. D. Whittemore, for groceries.....		3 00		
		<hr/>	\$	6,055 83
			\$	52,026 89
Balance to General Treasury Fund				39 84
			\$	<hr/> 52,066 73 <hr/>

POLICE.

Annual Appropriation.....	\$	120,000 00	
Additional Appropriation.....		468 31	
		<hr/>	\$ 120,468 31

RECEIPTS.

From Appropriation for Care of City Hall, for services of officers.	\$	1,089 00	
Appropriation for City Cemeteries, for services of officers		2 75	
Appropriation for Huntington Hall, for services of officers.		6 88	
Appropriation for Law Department, for services of M. E. McDonald.....		1,301 92	
Willis L. Gardner, for overdraft.....		19 25	
		<hr/>	\$ 2,419 80
			<hr/>
			\$ 122,888 11
			<hr/>

EXPENDITURES.

Paid for SERVICES :			
To George R. Davis, superintendent	\$	1,833 33	
Wm. B. Moffatt, Deputy Superintendent.....		1,283 33	
		<hr/>	
Amount carried forward.....	\$	3,116 66	

<i>Amount brought forward</i>	\$	3,116 66	
To Wm. R. Kew, Deputy Superintendent		1,283 33	
John A. Faulkner, Commission (Chairman).....		1,100 00	
Harry R. Rice, Commissioner...		916 67	
Peter J. Brady, Commissioner..		916 67	
Joseph Smith, Clerk.....		1,375 00	
Sundry persons, for services as officers		101,483 44	
Sundry persons, for labor.....		4,722 78	
Electrician		1,219 53	
		<hr/>	\$ 116,134 08

Paid for FUEL:

To John G. Gordon, for weighing coal	\$	3 55	
Daniel Gage.....		668 97	
D. W. Horne & Son.....		59 50	
		<hr/>	\$ 732 02

Paid for SUNDRIES :

To Appropriation for Water Works, for water.....	\$	89 99	
Lowell Electric Light Corp., for lights.....		220 30	
Lowell Gas Light Co., for gas.....		277 00	
N. Tel. & Teleg. Co., for service		263 31	
N. E. Tel. & Teleg. Co., for rent of private line.....		381 06	
N. E. Tel. & Teleg. Co., for cross arms		10 25	
Dennis J. Breen, for expense of lawsuit.....		65 40	
Henry F. Quinn, for expense of lawsuit		83 30	
Michael J. Burns, for supplies and travelling expenses...		8 35	
Thomas E. Allen, for travelling expenses		16 28	
George R. Davis, for labor, appliances, right to use door opener, etc.....		65 27	
Charles Laflamme, for travelling expenses, etc.....		2 00	
		<hr/>	
<i>Amounts carried forward</i>	\$	1,482 51	\$ 116,866 10

<i>Amounts brought forward</i>	\$	1,482 51	\$	116,866 10
To Herbert D. Cullen, for labor...		40 00		
Fred Davis, for labor.....		28 75		
Peter McCormack, for labor....		42 06		
John O'Connor, for labor.....		67 85		
Robert Patterson, for labor....		35 00		
Xavier Russell, for labor.....		10 00		
Robert E. Bell, for profes- sional services.....		25 00		
Charles E. Adams, for hard- ware.....		1 50		
H. R. Barker Mfg. Co., for re- pairs.....		5 47		
Bartlett & Dow, for hardware.		70		
W. T. S. Bartlett, for pails....		60		
George H. Bennett, for black- smithing.....		2 50		
W. E. Decrow, for lock signal box, repairing magnets, etc		176 35		
Gordon-Burnham Battery Co., for glass cells.....		48 00		
Wm. H. Hope & Co., for screws.....		25		
Joel Knapp & Son, for grap- pling irons.....		4 00		
C. S. Knowles, for junctions, boxes and cable....		195 00		
W. A. Mack & Co, for iron cans.....		25 00		
James F. McElholm, for bells, buttons, etc.....		3 30		
Charles F. Morse, for batteries, wire insulators, etc.....		88 82		
N. E. Gamewell & Co., for rib- bons, pails, switch, repair- ing register, etc....		29 29		
H. B. Shattuck & Son, for bard- ware and tools.....		12 13		
Sweeney & Welch for pipe, fit- tings and labor.....		152 74		
Thompson Hardware Co., for fork.....		35		
Tucke & Parker, for charging and use of batteries.....		31 30		
Washburn & Moen Mfg. Co., for wire.....		244 75		
Western Electric Ins. Co., for repairs.....		5 30		
<i>Amounts carried forward</i>	\$	2,758 46	\$	116,866 10

<i>Amounts brought forward</i>	\$	2,758 46	\$	116,866 10
To H. H. Wilder & Co., for pails, water pot, etc.....		13 95		
C. Zimmer, for fitting keys, and repairs		27 35		
Charles E. Adams, for moth balls, etc.....		2 44		
Am. Bolt Co., for bolts.....		72		
F. M. Bill & Co., for gold dust.		4 25		
Carter & Sherburne, for medi- cine		2 00		
C. B. Coburn & Co., for oil, glue, cord, etc		59 83		
Crystal Oil Co., for oil.....		1 65		
Donovan & Co., for soap....		1 41		
Ellingwood & Co., for medicine		2 40		
Daniel Gage, for ice.....		33 45		
C. H. McEvoy, for telephone cords.....		2 64		
F. H. Pearson & Co., for black- ing.....		12 50		
Simpson & Rowland, for bags...		66		
Talbot Dyewood & Chemical Co., for chemicals.....		61 77		
G. J. & D. Bradt, for crackers..		53 15		
Caleb L. Smith, for tea and sugar.....		5 34		
V. G. Barnard, for stamps.....		17 00		
Courier-Citizen Co., for printing and advertising.....		110 85		
Daily News Co., for advertising.		25 25		
Dumas & Co., for blank books..		47 55		
Greenough, Adams & Cushing, for ink.....		2 00		
Thomas H. Lawler for stamps and stationery		44 58		
Lepine & Co., for advertising...		30 00		
Lowell Sun, for printing and advertising.....		36 25		
Lowell Sunday Press, for adver- tising		12 50		
J. Merrill & Son, for directories.		10 00		
Morning Mail Co., for advertis- ing.....		52 50		
G. C. Prince & Son, for diaries and stationary.....		53 60		
Pulsifer, Cook & Co., for paper.		102 26		
<i>Amount carried forward</i>	\$	3,588 31	\$	116,866 10

<i>Amounts brought forward</i>	\$	3,588 31	\$	116,866 10
To F. E. Rollins, for typewriting.....		25 00		
Tilton & Co., for stationery...		2 75		
F. A. M. Tobin, for printing...		4 60		
M. G. Wight & Co., for paper..		3 85		
J. S. Marion, for photographs..		2 00		
A. Max Powers, for photographs.....		23 00		
J. T. Carter & Co., for table...		21 75		
William F. Chester, for billies.		10 50		
John J. Cluin, for repairing clocks.....		2 50		
Gardner Bros., for repairing chair.....		2 50		
Raphael Masstranziallo, for insignia... ..		3 75		
U. S. Bunting Co., for flag.....		16 75		
Oak Hall Clothing Co., for lace, straps and wreaths.....		33 00		
A. G. Pollard & Co., for towel-ing.....		1 80		
H. A. Winship, for police belts, etc		35 00		
J, B. Cover & Co., for grain, salt and straw		132 86		
C. H. Cutter, for hay.....		106 65		
Fred A. Fox, for hay.....		140 40		
William E. Livingston, for salt.		2 60		
James Meek, for grain.....		15 99		
E. S. Sherman & Co., for oats..		145 53		
A. G. Stiles & Co., for oats.....		49 92		
E. N. Wood & Co., for oats....		64 30		
Y. W. C. A., for board of girls		4 00		
A. H. Chner, for repairing harnesses.....		11 75		
J. C. Donovan, for pads, harness and repairing.....		93 55		
II. F. Ebert, for repairing harness		66 20		
Ebert Harness Co., for repairing harnesses.....		3 30		
Cahill Bros., for shoeing horses.		39 85		
Desmond & Barrett, for shoeing horse.....		1 00		
Cornelius Desmond, Agt., for shoeing horses		48 75		
<i>Amounts carried forward</i>				

Amounts carried forward..... \$4,703 71 \$ 116,866 10

<i>Amounts brought forward</i>	4,703 71 \$	116,866 10
To John J. Donnelly, for shoeing horses.....	75 60	
M. V. B. Libbey, for shoeing horses.....	53 55	
Fay Bros. & Hosford, for repairing carriages.....	116 15	
Sawyer Carriage Co., for repairing carriages.....	59 87	
Charles R. Wood & Son, for professional services	54 50	
James McLean, per resolution..	50 00	
Charles Clapp, for brown horse.	150 00	
Morse Coach Co., for carriage hire	6 00	
J. H. Sparks, for professional services and carriage hire..	24 50	
American Express Co., for transportation	1 90	
B. & L. Des. Ex. Co., for transportation.....	70	
B. & M. R. R., for transportation	3 70	
Manchester & Concord, N. H., Ex. Co., for transportation.	30	
N. Y. & B. Des. Ex. Co., for transportation	1 90	
N. Y., N. H. & H. R. R., for transportation	1 15	
	<hr/>	<hr/>
	\$	5,303 53
Total Expenditure for the year 1898.....		<hr/>
	\$	122,169 63

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Water Works, for water	\$	25 32	
Thomas E. Allen, for expenses.		46 50	
J. C. Bennett, for hardware....		8 00	
G. J. & D. Bradt, for crackers..		16 90	
M. J. Burns, for expenses.....		1 35	
Henry W. Barnes, for cutting stripes... ..		3 00	
	<hr/>	<hr/>	
<i>Amounts carried forward</i>	\$	101 07 \$	122,169 63

<i>Amounts brought forward</i>	\$	101 07	\$	122,169 63
To H. R. Barker Manufacturing Co., for repairs.....		1 50		
Cabill Bros., for shoeing		4 50		
Courier Citizen Co., for printing		28 50		
Daily News Co., for advertising.		3 75		
Desmond & Barrett, for shoeing horses.....		5 00		
John J. Donnelly, for shoeing horses.....		4 00		
H. F. Ebert, for repairing harnesses....		1 60		
Fay Bros. & Hosford, for repairing carriages.....		3 75		
Fred A. Fox, for hay.....	121 41			
Daniel Gage, for ice.....	15 45			
Hutchins Rubber Type Foundry, for stamps.....	5 90			
Chales Laflamme, for expenses..	2 50			
M. V. B. Libbey, for shoeing horses.....	4 55			
Langdon & Brown. for lamps...	6 90			
Lowell Electric Light Corp., for lights	25 78			
Lowell Gas Light Co., for gas..	43 50			
Lowell Sunday Press, for printing.	1 50			
Lepine & Co., for advertising...	4 50			
Thomas Mather, for fittings ...	2 51			
Morning Mail Co., for advertising.....	6 00			
Manchester & Concord, N. H., Ex. Co., for transportation.	15			
N. E. Tel. & Teleg. Co., for service	22 04			
John O'Connor, for labor.....	35 65			
Tucke & Parker, for repairs....	6 95			
Thompson Hardware Co., for hardware	9 35			
		<hr/>	\$	468 31
			\$	122,637 94
Balance to General Treasury Fund.....			\$	250 17
			<hr/>	
			\$	122,888 11
			<hr/>	

PUBLIC BUILDINGS.

To Annual Appropriation.....	\$	12,500 00	
Additional Appropriation.....		62 96	
		<hr/>	\$ 12,562 96

RECEIPTS.

Received from the following Appropriation for labor and material:

Water Works.....	\$	141 78	
Rifle Range.....		36 62	
Elections.....		681 21	
Inspector of Milk, Vinegar, etc.....		11 01	
Huntington Hall.....		13 75	
Paupers—Out-Door Relief.....		551 00	
Paupers—Almshouse.....		95 05	
Care of City Hall.....		70 70	
Commons.....		15 41	
Incidentals.....		19 87	
City Treasurer.....		2 63	
Soldiers and Sailors Memorial Tablets.....		18 45	
Schools.....		1,046 94	
Sewers.....		2 18	
Huntington Hall—Re-building.....		101 38	
		<hr/>	\$ 2,807 93
			<hr/>
			\$ 15,370 94
			<hr/>

EXPENDITURES.

Paid SUPERINTENDENT :

To George T. Woodward.....	\$	399 64	
Wm. T. True.....		1,479 68	
Henry J. Doherty.....		19 72	
		<hr/>	\$ 1,899 04

Paid Sundry Persons, for labor...	\$	8,027 17	
		<hr/>	\$ 8,027 17

Paid for LUMBER, HARD-
WARE, etc. :

To Burnham & Davis.....	\$	268 84	
Howe Lumber Co.....		24 00	
Charles E. Howe & Co.....		37 48	
Wm. H. Parker & Son.....		25 10	
Pratt & Forrest.....		77 95	
Amasa Pratt & Co.....		81 46	
Wm. H. Wiggin.....		245 38	
Charles E. Adams.....		19 10	
Bartlett & Dow.....		32 47	
W. T. S. Bartlett.....		3 00	
Boutwell Bros.....		1 95	
H. B. Shattuck & Son.....		11 43	
Thompson Hardware Co.....		49 94	
		<hr/>	\$ 878 10

Paid for SUNDRIES :

To Appropriation for Commons, for labor and material.....	\$	36 00	
Appropriation for Enginee- ing, for Engineering.....		7 50	
Appropriation for Streets, for sand and teaming.....		86 15	
Appropriation for Water Works, for Water.....		34 20	
Lowell Electric Light Corp., for power		177 37	
N. E. Tel. & Teleg. Co., for ser- vice.....		125 40	
H. R. Barker Mfg. Co., for pipe, fittings, labor, etc.....		142 21	
		<hr/>	
<i>Amounts carried forward.....</i>	\$	608 83	\$ 10,804 31

<i>Amounts brought forward</i>	\$	608 83	\$	10,804 31
To Sturgis C. Baxter, for inspecting boilers.....		4 00		
T. Costello & Co., for fittings and labor.....		12 90		
Drury & Green, for urinal and labor.....		8 36		
Wm. F. Enwright, for pipe, sol- der, labor, etc.....		62 81		
Robert Ferris, for repairing bells.....		14 00		
Charles E. Gee, for repairs.....		9 66		
Joel Knapp & Son, for plates, rods and washers.....		69 80		
W. A. Mack & Co., for pipe, labor, repairing roof at City Hall, etc.....		285 72		
Charles F. Morse, for charges, zincs and links.....		2 20		
Pratt & Forrest, for grinding knives.....		70		
Daniel A. Polley, for slice bar..		1 75		
Anson A. Reed, for grindstone dressers.....		2 50		
Rice & Co., for wire cloth.. ...		2 09		
Scannell & Wholley, for repair- ing boilers.....		337 88		
E. A. Shea, for pipe fittings and labor.....		197 62		
Sweeney & Welch, for pipe, fit- tings and labor.....		591 58		
J. W. Swett & Co., for copper cable.....		189 37		
Tucke & Parker, for bells and wire.....		25 40		
John Cross, for putting up awn- ing and repairing flags....		7 00		
Leighton Bros., for jugs.....		6 00		
Wm. L. Lockhart Co., for coffin trimmings.....		102 25		
O'Donnell & Gilbride Co., for cotton cloth.....		23 71		
J. W. Robinson, for repairing roof.....		5 00		
Edward Cawley, for pipe.....		2 96		
Philip Ginty, for slate, zinc and labor.....		44 39		
<i>Amounts carried forward</i>	\$	2,618 48	\$	10,804 31

<i>Amounts brought forward</i>	\$	2,618 48	\$	10,804 31
To Robert Goulding & Son, for slating.....		18 75		
Wm. E. Livingston, for sand...		10 30		
E. A. & A. T. Smith, for concrete.....		20 72		
Samuel E. Snow, for mason work and material.....		68 97		
Staples Bros., for hods.....		2 50		
Walsh & Co., for plastering...		14 75		
E. A. Wilson, Agt., for brick and cement.....		19 03		
Charles E. Adams, for brushes and shellac.....		57 70		
Atlantic Varnish Works, for varnish.....		30 21		
C. B. Coburn & Co., for lead, oil, glass, rope, etc.....		305 06		
Frank Garvey, for medicine....		2 70		
A. L. Kittredge & Co., for oil		3 60		
Caleb L. Smith, for potash and soap.....		4 90		
Daniel Gage, for coal.....		83 91		
John G. Gordon, for weighing coal.....		45		
V. G. Barnard, for stamps.....		2 00		
B. & M. R. R. Tickets, for tick- ets.....		40 25		
C. F. Kidder, for postage.....		4 00		
Wm. T. True, for travelling ex- penses.....		14 55		
F. Blanche Hard, for type- writing.....		5 22		
Hutchins Rubber Type Foun- dry, for stamps.....		3 45		
Thomas H. Lawler, for pad....		15		
Lowell Rubber Co., for rubber bands.....		1 90		
Morning Mail Co., for papers..		40		
G. C. Prince & Son, for station- ery.....		2 35		
Sampson, Murdock & Co., for directory.....		2 00		
C. K. Studdert, for medicine and care of horse.....		17 00		
Tilton & Company, for ink.....		1 52		
<i>Amounts carried forward</i>	\$	3,356 82	\$	10,804 31

<i>Amounts brought forward</i>	\$	3,356 82	\$	10,804 31
To F. A. Dalin, for professional services.....		8 00		
W. A. Sherman, for professional services.....		4 00		
Cahill Bros., for shoeing horses		3 75		
Cornelius Desmond, Ag., for clipping and shoeing horses.....		54 75		
Charles S. Kappler, for shoeing horses and repairing.....		47 45		
M. V. B. Libbey, for shoeing horses... ..		2 50		
Henry Reynolds, for shoeing horses.....		14 35		
Robert Barris, for repairing harnesses		29 40		
A. L. Butman, for horse cover..		4 00		
A. H. Cluer, for cushion and repairing harnesses.....		8 00		
Conant & Co., for blanket and repairing harness.....		2 80		
J. C. Donovan, for repairing harnesses		17 40		
H. F. Ebert, for repairing harnesses.....		9 05		
E. P. Bryant, for repairing wagons.....		44 45		
Fay Bros. & Hosford, for repairing carriages.....		4 20		
F. B. Hill & Co., for repairing carriages.....		208 65		
Sawyer Carriage Co., for repairing carriages.....		32 86		
P. F. McNulty, for carriage hire and board of horses..		498 13		
Morse Coach Co., for carriage hire.....		6 00		
C. H. Hanson & Co., for use of cart.....		42 00		
P. Hunt, for teaming.....		5 00		
T. G. Little, for teaming.....		18 50		
James Mullen, for teaming....		8 00		
Wm. Roberts, for teaming....		16 00		
American Express Co., for transportation.....		2 35		
<i>Amounts carried forward</i>	\$	4,448 41	\$	10,804 31

<i>Amounts brought forward</i>	\$	4,448 41	\$	10,804 31
To B. & M. R. R., for transportation.....		20 65		
		<hr/>		4,469 06
Total Expenditure for the year 1898.....			\$	<hr/> 15,273 31

1897 BILLS.

Paid for SUNDRIES :

To American Express Co., for transportation	\$	55		
A. P. Bateman, for lumber...		4 00		
Bartlett & Dow, for hardware..		1 15		
T. M. Bolton, for blankets and repairing harnesses.....		19 35		
Charles E. Hall, for tiles.....		3 20		
Lowell Electric Light Corp., for power.....		3 50		
P. F. McNulty, for keeping horses		15 73		
N. E. Tel. & Teleg. Co., for service.....		7 88		
Scott & O'Day, for plumbing..		5 60		
E. S. Sherman & Co., for salt..		25		
Thompson Hardware Co., for nails.....		1 75		
		<hr/>	\$	62 96
			\$	15,336 33
Balance to General Treasury Fund				34 61
			\$	<hr/> 15,370 94

RIFLE RANGE.

Annual Appropriation.....	\$	675 00	
Additional Appropriation.....		22 63	
			<u>\$ 697 63</u>

EXPENDITURES.

Paid for SUNDRIES :

To James McAnney, for services..	\$	463 75	
Appropriation for Public Buildings, for labor and material		18 52	
Town of Dracut, for taxes of 1898		30 75	
Charles E. Adams, for shovel, broom and glass.....		1 42	
John Cross, for repairing flag...		1 25	
Robert Ferris, for repairing telephones		57 75	
Charles F. Morse, for keys, wire, insulators, etc.....		25 23	
Joseph Peabody, Agt., for insurance		30 00	
D. W. Horne & Son, for coal...		11 85	
Stanley & Co., for coal.....		7 00	
E. A. Wilson, Agt., for coal....		13 70	
Total Expenditure for the year 1898			<u>\$ 661 22</u>
Amount carried forward.....			<u>\$ 661 22</u>

<i>Amount brought forward.</i>	\$	661 22
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1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Public Build- ings, for labor and material \$	18 10	
	<hr/>	18 10
		<hr/>
		679 32
Balance to General Treasury Fund.		18 31
		<hr/>
	\$	<hr/> 697 63 <hr/>

REFUNDED LICENSE FEES.

Appropriation from General Treasury Fund.....	\$	50 00		\$	50 00
					50 00

EXPENDITURES.

Refunded License fees to Sundry persons as follows :

To Joseph Bowers.....	5 00				
O. J. Coburn.....	5 00				
C. H. Dennison.....	5 00				
G. P. Dadman.....	5 00				
John F. Farr.....	5 00				
N. A. Glidden.....	5 00				
C. A. Hamblett.....	5 00				
Fred U. Haskell.....	5 00				
O. Merrill.....	5 00				
Sybil Richardson.....	5 00				
				\$	50 00

SCHOOLS.

Annual Appropriation	\$	278,000 00	
Additional Appropriation		2,870 83	
		<u> </u>	280,870 83
Received from B. & L. Des. Ex. Co., for overdraft	\$	30	
		<u> </u>	30
			<u><u>\$ 280,871 13</u></u>

EXPENDITURES.

Paid SUPERINTENDENT :

To A. K. Whitcomb, salary	\$	3,000 00	
		<u> </u>	\$ 3,000 00
Paid Truant Officers		3,353 33	
		<u> </u>	3,353 33

Paid for SERVICES OF TEACHERS :

In High School	21,767 25	
Grammar Schools	74,065 31	
Primary Schools	65,580 80	
Training School	10,918 69	
	<u> </u>	
<i>Amounts carried forward</i>	\$ 172,332 05	\$ 6,353 33

<i>Amounts brought forward</i>	\$ 172,332 05	\$ 6,353 33
Kindergarten Schools.....	11,990 75	
Manual Training School.....	2,200 00	
Penmanship.....	2,127 50	
Drawing.....	1,250 00	
Music.....	1,060 00	
Sewing.....	800 00	
Military.....	178 00	
	<hr/>	\$ 191,938 30
Paid for services of Janitors...	120 00	
	<hr/>	120 00
Paid for services of Clerks....	569 00	
	<hr/>	569 00

Paid for BOOKS:

To Allyn & Bacon.....	\$ 77 88	
American Book Co.....	243 00	
Edward E. Babb & Co.....	305 44	
D. Appleton & Co.....	54 00	
American School Book Journal	\$ 1 00	
Boston School Supply Co.....	1,944 09	
Walter H. Baker & Co.....	1 05	
T. H. Castor & Co.....	16 63	
Educational Publishing Co.....	30 00	
Emerson College of Oratory...	61 25	
Ginn & Co.....	1,429 13	
A. Flannagan.....	4 50	
H. E. Hooper.....	15 00	
Harper & Bros.....	132 08	
D. C. Heath & Co.....	246 26	
Houghton, Mifflin & Co.....	434 65	
Henry Holt & Co.....	101 55	
E. L. Kellogg & Co.....	15 00	
King, Richardson Publishing Co.....	285 30	
Leach, Shewell & Sanborn....	224 79	
Lee, & Shepard.....	101 68	
Longmans, Green & Co.....	16 51	
Leach, Shewell & Co.....	81 46	
Maynard, Merrill & Co.....	128 53	
N. E. Publishing Co.....	2 50	
G. C. Prince & Son.....	3 00	
B. H. Sanborn & Co.....	56 67	
Science C o m. Educational Workers.....	3 00	
Charles Scribner's Sons.....	60	

<i>Amounts carried forward</i>	\$ 6,016 55	\$ 198,980 63
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<i>Amounts brought forward.....</i>	\$	6,016 55	\$	198,980 63
To Silver, Burdette & Co.....		1,576 80		
Thompson, Brown & Co.....		159 20		
The Morse Co.....		78 23		
University Publishing Co.....		13 00		
Werner School Book Co.....		128 00		
Wm. Ware & Co		792 68		
		<hr/>		8,764 46

Paid for BLANK BOOKS, STA-
TIONERY, PRINTING etc:

To A. R. Andrews.....	40 50
Andrews School Furniture Co.	16 00
American File & Index Co....	24 00
Boston School Supply Co.....	255 24
Edward E. Babb & Co	1,987 97
Butterfield Printing Co.....	13 00
M. L. Bassett & Co.....	10 60
John Barnes	26 93
Buckland Printing Co.....	2 25
E. A. Burgess.....	8 60
John Carter & Co.	29 50
Courier-Citizen Co.....	117 50
F. U. Cambridge.....	4 25
Cambridge Botanical Supply Co.....	2 27
Daily News Job Print.....	20 74
Dumas & Co.....	272 21
Enterprise Printing and Stamp Works	9 65
Eagle Pencil Co.	141 75
Educational Publishing Co ...	2 00
Estabrook Steel Pen Mfg. Co...	32 25
F. J. Fleming.....	113 28
C. F. Hatch & Co.....	431 41
D. C. Heath & Co.....	976 27
Holden Patent Book Cover Co.	91 49
James T. B. Ives.....	10 00
George F. King & Co.....	531 25
Thomas H. Lawler.....	330 40
Lowell Sun.....	31 75
Morning Mail Co	278 67
Munger & Son	5 00
George S. Perry & Co	44 00
G. C. Prince & Son	30 88
Pulsifer, Cook & Co	54 50

<i>Amounts carried forward.....</i>	\$	5,946 11	\$	207,745 09
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<i>Amounts brought forward</i>	\$	5,946 11	\$	207,745 09
To Prang Educational Co		30 00		
Rand, McNally & Co.....		83 70		
Charles E. Robinson		10 90		
James J. Shannon & Co.....		12 25		
H. B. Shattuck & Son.		60 00		
A. Storrs & Bement Co.....		186 40		
Sampson, Murdock & Co.....		6 00		
Thorpe & Bailey.....		33 00		
The Boston Bank Note Co.....		75 00		
Tilton & Co.....		18 60		
Thompson & Hill.....		27 00		
F. A. M. Tobin.....		42 72		
The Art Amateur.....		4 00		
Union Printing Co.....		84 93		
Vox Populi Press		11 00		
M. R. Warren & Co.....		10 00		
M. G. Wight & Co.....		433 77		
				<hr/>
				7,075 38

Paid for FUEL :

To Appropriation for Paupers, Alms-house.....		549 01		
C. Constantineau, for weighing and inspecting coal.....		21 30		
John G. Gordon, for weighing and inspecting coal.....		122 40		
Daniel Gage.....		11,269 85		
D. W. Horne & Son		1,224 58		
Wm. Kittredge Co.....		93 68		
Middlesex Coal Co., for team- ing.....		64 38		
E. A. Wilson, Agt.....		26 91		
				<hr/>
				13,372 11

Paid for SUNDRIES :

To Appropriation for Engineer- ing, for engineering.....		25 75		
Appropriation for Public Build- ings, for labor and material.		1,046 94		
Appropriation for School Houses, for labor and ma- terial		2,406 67		
Appropriation for Water Works for Water.....		1,071 76		
				<hr/>
<i>Amounts carried forward</i>	\$	4,551 12	\$	228,192 58

<i>Amounts brought forward</i> \$	4,551 12	\$ 228,192 58
To Appropriation for Water Works for repairing meters.....	9 50	
Lowell Electric Light Co., for power.....	973 84	
Lowell Electric Light Corp., for lighting.....	84 18	
Lowell Gas Light Co., for gas, stove and meter connec- tions.....	270 70	
N. E. Tel. and Teleg. Co., for services.....	206 82	
Burnham & Davis, for lumber..	23 79	
Davis & Sargent, for lumber...	129 45	
Howe Lumber Co., for lumber..	430 67	
Amasa Pratt & Co., for lumber.	92 06	
Wm. H. Wiggin, for lumber...	144 91	
Charles E. Adams, for hardware, etc.....	66 66	
Milton Aldrich, for bench screws	9 80	
W. T. S. Bartlett, for hardware etc.....	23 34	
Bartlett & Dow, for hardware, etc.....	102 39	
J. C. Bennett, for hardware, etc.	8 00	
H. B. Shattuck & Son, for hard- ware, etc.....	100 15	
Thompson Hardware Co., for typewriter, hardware, etc..	319 11	
A. H. Abbott, for blacksmithing	2 00	
H. R. Barker Mfg. Co., for chim- neys, mantles and labor....	17 18	
John Callaghan, for repairs, etc.	46 17	
Chandler & Barber, for tools...	1 50	
W. W. Carey, for saw guide...	6 00	
Farrell & Conaton, for pipe, fit- tings and labor.....	109 17	
Globe File Works, for recutting files.....	7 02	
C. O. A. Grover, for letters and figures.....	6 10	
Harry F. Harding, for repairing bells and batteries.....	31 28	
Joel Knapp & Son, for repairs.	75	
Lowell Wire Works, for brass riddles.....	2 70	
<i>Amounts carried forward</i> \$	7,776 36	\$ 228,192 58

Amounts brought forward..... \$ 7,776 36 \$ 228,192 58

To W. A. Mack & Co., for drinking cups, ink, fillers, etc.....	7 10	
Thomas Mather, for tips.....	1 50	
Charles F. Morse, for telephones and bells.....	165 75	
James F. McElholm, for salamoniac and labor.....	8 20	
O. A. Richardson's Sons, for sharpening scissors, keys, repairs, etc.....	16 85	
Pevey Bros., for castings.....	13 03	
Rice & Co., for covers.....	2 50	
Sweeney & Welch, for pipe, fittings and labor.....	103 07	
Tucke & Parker, for repairs and recharging batteries.....	119 86	
H. H. Wilder & Co., for radiator fittings etc.....	33 16	
D. H. Wilson & Co., for pipe, fittings and labor.....	11 40	
Weir Electric Co., for carbons, zinc and labor.....	41 62	
N. J. Weir & Co., for oven.....	75	
Samuel Young, for repairing bells.....	9 34	
C. Zimmer, for repairing guns	22 15	
Ziegler Electric Co., for apparatus.....	2 50	
F. H. Butler & Co., for diamond dies.....	1 00	
Boston Feather Duster Co., for dusters ...	49 60	
Baker & Adamson Chemical Co., for laboratory supplies....	12 21	
C. B. Coburn & Co., for dusters, tapers, brushes, glue, oil, brooms, etc.....	410 39	
Crystal Oil Co., for oil.....	17 03	
Connors Bros., for sand.....	2 50	
Ellingwood & Co., for sulpho-naphthol.....	75 00	
J. T. Carter & Co., for cutter sticks.....	65	
Donovan & Co., for mops and gold dust.....	14 75	

Amounts carried forward \$ 8,918 27 \$ 228,192 58

<i>Amounts brought forward</i>	\$	8,918 27	\$	228,192 58
To Eimer & Anend, for laboratory supplies ..		68 48		
Franklin Educational Co., for laboratory supplies.....		71 64		
Josiah Gates & Sons, for belting		1 84		
Frank B. Hough, for polish....		11 50		
H. W. John's Manufacturing Co., for stain wood filler....		1 68		
L. E. Knott Apparatus Co., for laboratory supplies.....		46 73		
Wm. E. Livingston, for sand and fire clay.		3 25		
George S. Perry, for modeling clay		9 40		
Simpson & Rowland, for kirkoline and soap		21 10		
Sulpho-Nathol Co., for distributing can.....		25		
Talbot Dyewood & Chemical Co., for ammonia.....		35 14		
Wadsworth, Howland & Co., for paint and brushes.....		81 50		
E. A. Wilson & Co., for brick, cement and lime.....		88 88		
Adams & Co., for furniture...		293 43		
Patrick Brady, for reseating chair.....		24 00		
Willard A. Brown, for shoe pegs		65		
Edward E. Babb & Co., for flags		21 06		
Bunkio Matsuki for brushes....		5 00		
J. T. Carter & Co., for gun racks....		171 00		
John Cross, for repairing flags and use of tent.....		13 75		
Chandler Adjustable Chair and Desk Co., for desks.....		408 10		
J. J. Cluin, for clocks, repairs, labor on Carney medals, etc		309 50		
Cook, Taylor & Co., for pins and cotton cloth.....		66 22		
G. W. Dudley, for repairing clock		1 00		
George H. Gage, for clock and repairing.....		8 35		
<i>Amounts carried forward</i>	\$	10,681 72	\$	228,192 58

<i>Amounts brought forward</i>	\$	10,681 72	\$	228,192 58
To Gookin Bros., for settees.....		81 20		
J. J. Gaynor & Co., for mirror plates.....		1 65		
J. L. Hammett Co., for kindergarten supplies.....		437 07		
E. Howard Watch & Clock Co., for repairing clock.....		5 80		
Holton Bugbee, for supplies...		4 80		
Rose Jordan Hartford, for ribbon.....		30 00		
A. L. Kittredge & Co., for shades, pulleys and labor..		165 62		
Lowell Wall Paper Co., for paper.....		4 05		
Lowell Rubber Co., for washers, couplings, tips, hose, etc...		22 75		
George L. Lawson, for needles and yarn.....		4 47		
George E. Maker, for picture frames.....		8 00		
Murphy, Leavens & Co., for brushes.....		71 44		
McNabb Bros., for laundering..		4 68		
McIntosh Battery and Optical Co., for test cards.....		2 00		
O'Donnell & Gilbride Co., for shades, oil cloth, use of furniture, labor, etc.....		240 96		
A. G. Pollard & Co., for cloth..		39 35		
F. W. Puffer & Co., for cuspidores.....		1 50		
Robertson & Co., for furniture..		13 50		
Harry Raynes, for medals.....		25 00		
Wm. Read & Sons, for sword and belt.....		6 25		
James Stanley, for cleaning clocks.....		6 00		
Spencer & Co., for sign.....		75		
Fred Theise, for baskets.....		7 00		
Henry F. Whiting, for belt and labor.....		4 00		
Whittier Cotton Mills, for cord.		30		
C. E. Austin, for drums and repairs.....		9 35		
Irvin A. Foote, for tuning and repairing pianos....		114 00		
<i>Amounts carried forward</i>	\$	11,993 21	\$	228,192 58

<i>Amounts brought forward</i>	\$	11,993 21	\$	228,192 58
To The M. Steinert & Sons Co., for piano, music, etc		507 38		
Smith Premier Typewriter Co., for repairing typewriters...		3 50		
Wyckoff, Seamans & Benedict, for repairing typewriters...		3 80		
Samuel E. Snow for mason work and material.....		45 00		
W. H. Fuller, for foundation Manual Training School...		312 50		
Joel Knapp & Son, for iron work		25 00		
J. W. Robinson, Jr., for roofing		120 00		
F. B. Hill & Co., for blacksmith- ing.....		12 00		
B. F. Sturtevant & Co., for forges and equipments....		720 00		
Walsh & Co., for mason work..		16 92		
E. A. Wilson & Co., for brick and cement.....		34 89		
P. F. Brady, for rent.....		80 00		
Fay Bros. & Hosford, for rent.		100 00		
C. I. Hood, for rent.....		266 68		
Pawtucket Congregational So- ciety, for rent.....		140 00		
Percy Parker, for rent.....		481 75		
Mrs. W. E. Adams, for services as monitor		78 00		
A. K. Whitcomb, for expenses to Chatanooga, etc.....		141 60		
John F. Wilhams, for railroad tickets and postage.....		34 60		
Wm. F. Thornton, for travelling expenses, etc.....		10 40		
Lysander Dickerman, for ad- dress		35 00		
Henry Houck, for address.....		25 00		
Lillian Morrison, for services as monitor.....		22 00		
Alexander Greig, Jr., for ser- vices as military instructor.		25 00		
Wm. H. Clark, for overpayment of tuition.....		10 00		
Wm. A. Johnson, for profes- sional services.....		5 00		
<i>Amounts carried forward</i>	\$	15,249 23	\$	228,192 58

Amounts brought forward..... \$ 15,249 23 \$ 228,192 58

To Alice Clark Hutchinson, for services.....	10 00
Edith L. Monroe, for services..	15 00
Harriet Varney, for services..	5 00
B. W. Farnham, for services as judge.....	2 00
George E. Worthen, for services as judge.....	2 00
George E. Worthen, Jr., for services as judge.....	2 00
A. K. Kennedy, for services as quartermaster.....	50 00
American Orchestra, for services.....	72 00
National Band, for services....	44 00
R. McDaniels, for arranging music.....	5 00
T. M. Graves, for engrossing commissions and diplomas.	50 25
J. J. Hunt, for engrossing diplomas.....	36 60
Charles F. Carr, for care of Armory.....	15 00
Henry Dufresne, for repairing drums.....	7 70
John E. Conway, for services...	2 76
John Freeman, for services....	1 38
Francis E. Moore, for services.	1 38
Michael J. Lynch, for services as janitor.....	18 75
Wm. Mack, for services as janitor.....	18 75
John Scott, for services as janitor.....	1 00
Gertrude Edmunds, for postage	5 00
Middlesex County Truant School for board of truants.....	4,200 04
R. A. Griffiths, for plant decorations.....	50 00
George H. Miller, for lemonade and service.....	10 00
Merrill & Clark, for professional services.....	70 00
Mary Delaney, for labor.....	10 50
Bridget Donnelly, for labor....	15 00
Jennie P. Manchester, for labor.	5 00

Amounts carried forward..... \$ 19,975 34 \$ 228,192 58

<i>Amounts brought forward</i>	\$	19,975 34	\$	228,192 58
To George A. Philbrick, for labor..		44	55	
J. Douglass Rivet, for labor....		15	83	
A. L. Butman, for robe.....		4	50	
T. M. Bolton, for repairing har- ness		4	75	
A. H. Cluer, for repairs, sun um- brella, etc		18	65	
John J. Donnelly, for shoeing horses.....		47	10	
Owen J. Carney, for shoeing horses.....		6	15	
H. F. Ebert, for whip.....			75	
Sawyer Carriage Co., for pung and repairing carriages....		119	89	
J. H. Sparks, for keeping horses and clipping.....		523	96	
R. W. Hunt, for carriage hire..		4	40	
C. Roussin, for use of horse....		7	25	
Thomas F. Fay, for cleaning vaults.....		27	00	
Sundry persons, for teaming as follows :				
A. O. Coburn.....		22	50	
Frank Dunlap.....		2	25	
Ed. Judge.....		4	00	
D. P. Knowlton		6	50	
T. G. Little.....		15	00	
F. S. Ladd.....		1	50	
D. F. Lyons		11	25	
J. W. MacDonald		15	00	
Wm. Roberts.....		40	00	
G. E. Stanley		4	05	
George Whitely.....		1	50	
Am. Ex. Co., for transportation.		48	55	
B. & M. R. R., for transporta- tion		21	19	
B. & M. R. R. Tickets, for tickets		60	50	
Lowell and Suburban Street Railway, for tickets.....		33	00	
B. & L. Des. Ex. Co., for trans- portation		4	70	
Manchester & Concord N. H. Ex. Co., for transportation.		31	45	
<i>Amounts carried forward</i>	\$	21,123 06	\$	228,192 58

<i>Amounts brought forward</i>	\$	21,123 06	\$	228,192 58
To N. Y. & B. Des. Ex. Co., for transportation		4 30		
N. Y. N. H. & H. R. R. Co., for transportation.....		3 75		
G. E. Stanley, for transportation		71 13		
		<hr/>		21,202 24

EVENING SCHOOLS.

Paid for SUNDRIES :

To Sundry persons, for services as teachers	\$	12,972 88
Sundry persons for services as janitors		1,609 50
Lowell Electric Light Corp., for lights		141 60
Lowell Gas Light Co., for gas..		1,427 00
Frank S. Clark, for stamps....		6 00
A. K. Whitcomb, for expenses of committee to Boston...		5 20
Boston School Supply Co., for books		41 76
Courier-Citizen Co., for printing		34 95
Daily News Co., for advertising		1 87
Enterprise Printing & Stamp Works, for printing.....		45
Thomas H. Lawler, for station- ery		8 20
Lowell Daily Sun, for printing and advertising.....		17 25
Morning Mail Co., for printing		5 65
McIndoe-Butterfield Co., for printing		5 00
S. S. Packard, for books		16 20
Isaac Pitman & Sons, for books		28 80
Smith Premier Typewriter Co., for typewriters and tables		148 00
F. A. M. Tobin, for printing...		2 99
Thompson & Hill, for printing		3 75
Union Printing Co., for printing		7 52
W. H. Boody, for posting.....		6 00
Thomas M. Graves, for engross- ing diplomas		15 00

<i>Amounts carried forward</i>	\$	16,505 57	\$	249,394 82
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<i>Amounts brought forward</i>	\$	16,505 75	\$	249,394 82
To American Orchestra, for services		29 00		
John J. Cluin, for plate and engraving		3 00		
R. A. Griffiths, for use of plants,		25 00		
A. G. Pollard & Co., for ribbons,		7 25		
Frank R. Rix, for services.....		30 00		
John Scott, for services.....		1 00		
C. B. Coburn & Co., for tapers..		3 75		
Franklin Educational Co., for laboratory supplies.....		182 00		
D. W. Horne & Son, for coal...		101 20		
J. H. Sparks, for carriage hire..		2 50		
		-----		16,890 27

DRAWING SCHOOLS.

Paid for SUNDRIES:

To Sundry persons, for services as teachers	\$	3,921 50		
Sundry persons, for services as janitors		86 00		
Lowell Electric Light Corp., for lights		105 28		
Mary E. Cushing, for expenses,		1 07		
Abby F. Davis, for expenses...		9 00		
W. M. Foster, for blue prints..		7 00		
Henry M. Southworth, for drawings.....		50 00		
Charles E. Adams, for alcohol and shellac		2 60		
P. P. Caproni & Bro., for plaster, studies and repairing models		69 43		
C. B. Coburn & Co., for alcohol, shellac, etc.....		14 40		
A. L. Kittredge & Co., for pencils and rubbers		33 20		
Wm. E. Livingston, for plaster..		2 00		
Tilton & Co., for stationary....		1 37		
		-----		4,302 85
Total expenditure for the year 1898.....				270,587 94
<i>Amount carried forward</i>			\$	270,587 94

Amount brought forward..... \$ 270,587 94

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for School Houses, for labor and material, . . .	49 13
Appropriation for Water Works, for water	573 39
American Express Co., for trans- portation	80
American Book Co., for books .	124 00
Mrs. W. E. Adams, for services as matron	8 50
H. R. Barker Mfg. Co., for rakes and mantles	4 10
W. T. S. Bartlett, for hardware.	204 34
Bartlett & Dow, for hardware .	75
T. M. Bolton, for repairing har- ness	3 10
Edward E. Babb & Co., for books	6 38
B. & M. R. R., for transportation	2 41
B. & L. Des. Ex. Co., for trans- portation	30
E. J. Carroll & Co, for pipe, fit- tings and labor	242 65
A. H. Cluer, for repairing har- ness	50
C. B. Coburn & Co., for alcohol, brooms, glue, mops, etc . . .	20 52
G. R. Carothers, for sundries . .	6 50
Owen J. Carney, for shoeing horses	10 80
Henry Dufresne, for repairing drums	9 25
Farrell & Conaton, for pipe, fit- tings, labor, etc	150 00
Franklin Educational Co., for laboratory supplies	135 75
Mary Finnegan, for labor	7 40
John G. Gordon, for labor	10 00
J. L. Hammett Co., for supplies	40
C. I. Hood, for rent	133 33
C. H. Hanson, Jr., for robe	9 00
Lowell Electric Light Corp., for power	116 12

Amounts carried forward..... \$ 1,829 42 \$ 270,587 94

<i>Amounts brought forward</i>	\$ 1,829 42	\$ 270,587 94
To Lowell Electric Light Corp., for lights	78 42	
Lowell Gas Light Co., for gas...	315 45	
Middlesex Coal Co., for teaming	3 28	
Manchester & Concord, N. H., Ex. Co., for transportation	9 55	
James F. McElholm, for wire, labor, etc.....	9 40	
W. A. Mack & Co., for iron and labor	3 35	
McNabb Bros., for laundering..	2 92	
N. E. Tel. & Teleg. Co., for service ...	15 97	
John Oliver, for decorations....	18 00	
O'Donnell & Gilbride Co., for furniture.....	256 21	
George S. Perry, for ink.....	33 00	
Percy Parker for rent.....	50 00	
Spencer & Co., for sign.....	5 25	
David A. Polley, for forging..	3 00	
J. Douglass Rivet for services as Janitor.....	20 00	
G. E. Stanley, for transportation	63	
Thompson Hardware Co., for file cleaner.....	15	
Union Printing Co., for printing	1 25	
Wm. Ware & Co., for books...	163 17	
M. G. Wight & Co., for stationery, etc.....	16 41	
Werner School Book Co., for books	36 00	
	<hr/>	2,870 83
		<hr/>
		\$ 273,458 77
Balance to General Treasury Fund		7,412 36
		<hr/>
		<hr/>
		\$ 280,871 13
		<hr/>

SCHOOL HOUSES.

To Annual appropriation	\$	35,000 00		
Additional appropriation		23,733 57	\$	58,733 57

RECEIPTS.

Received from the following appropriations, for labor and material:

From Bartlett School-house	29 67	
Carter Street School-house	243 77	
Moody Street School-house	396 29	
Plain Street School-house	155 22	
Addition to Varnum School-house	713 53	
Schools	2455 80	
Farrell & Conaton, for overdraft	30 00	
James T. McElholm, for overdraft	9 40	
	<hr/>	4,033 68
		<hr/>
		62,767 25
		<hr/>

EXPENDITURES.

Paid Sundry persons, for services as janitors	\$	27,590 29	
Sundry persons, for labor		8,655 07	
	<hr/>		\$ 36,245 36
<i>Amount carried forward</i>			<hr/>
			\$ 36,245 36

Amount brought forward..... \$ 36,245 36

Paid for LUMBER, H A R D-
WARE, etc. :

To Burnham & Davis.....	\$ 77 93
J. T. Carter & Co	15
Davis & Sargeant.....	134 13
Howe Lumber Co.....	91 86
Amasa Pratt & Co.....	172 83
Pratt & Forrest.....	1 38
Wm. H. Wiggin.....	257 87
Charles E. Adams.....	96 42
Bartlett & Dow.....	77 02
W. T. S. Bartlett.....	2 91
J. C. Bennett.....	27 65
H. B. Shattuck & Son.....	6 57
Thompson Hardware Co.....	28 63

975 35

Paid for SUNDRIES :

To Appropriation for Streets, for sidewalk, labor, etc.....	132 10
Appropriation for Water Works, for pipe, fittings, labor, etc.....	6 00
Ashton Valve Co., for valves..	17 00
O. E. Averill, for blacksmith- ing.....	50
H. R. Barker Mfg. Co., for pipe, fittings, handles, brushes, etc.....	206 18
Sturgis C. Baxter, for inspect- ing boilers.....	66 00
John Calaghan, for labor.....	35
E. J. Carroll & Co., for pipe, fittings and labor.....	107 15
T. Costello & Co, for pipe, fittings and labor.....	337 85
Drury & Green, for pipe, fit- tings and labor.....	16 30
Wm. F. Enwright, for pipe, fittings and labor.....	589 58
Farrell & Conaton, for pipe, fittings and labor.....	482 23
Fuller & Warren Warming & Ventilating Co., for warm- ing and ventilating appara- tus.....	459 23

Amounts carried forward..... \$ 2,420 47 \$ 37,220 71

<i>Amounts brought forward</i>	\$	2,420 47	\$	37,220 71
To Robert Ferris, for buttons, carbons and labor.....		5 05		
H. J. Fitzpatrick, for tin and labor.....		12 74		
Lowell Steam Boiler Works, for repairing boilers.....		962 27		
W. A. Mack & Co., for repairing furnaces, etc.....		91 83		
James F. McElholm, for brushes, carbon, etc.....		50		
Middlesex Machine Co., for bolts, washers and labor...		25 13		
A. Parsons, for blacksmithing..		7 75		
David A. Polley, for angles, slice bar and poker... ..		7 11		
Rice & Company, for wire cloth.....		12 24		
Scott & O'Day, for fittings and labor.....		2 00		
J. W. Seeton, for blacksmithing.....		4 50		
W. M. Seaman, for auger closet		5 00		
E. A. Shea, for fittings and labor		124 27		
Sweeney & Welch, for pipe, fittings and labor.....		1,255 25		
Seannell & Wholley, for boiler and repairing.....		1,270 28		
Tucke & Parker, for repairs...		1 35		
The Wolfe Warming & Ventilating Co., for heaters		185 00		
H. H. Wilder & Co., for pipe, fittings, etc.....		36 12		
Billings, King & Co., for paints.		111 24		
Charles E. Adams, for brushes, lead, paint, etc.....		248 94		
C. B. Coburn & Co., for oil, paints, alcohol, etc.....		501 80		
Crystal Oil Co., for oil.....		10 75		
Frank Garvey, for medicine....		6 00		
Josiah Gates & Sons, for leather		60		
L. W. Hawkes & Co., for cloth.		12 60		
A. L. Kittredge & Co., for lead, oil, etc		141 07		
Murphy, Leavens & Co., for brushes.....		9 60		
<i>Amounts carried forward</i>	\$	7,471 46	\$	37,220 71

<i>Amounts brought forward</i>	\$	7,471 46	\$	37,220 71
To Whittier Cotton Mills, for sash cord.....		21 15		
Chandler Adjustable Chair & Desk Co., for lid supports..		7 20		
James Burns, for slating.....		57 18		
Edward Cawley, for pipe, traps and bends ...		12 22		
Conners Bros, for sand.....		1 00		
Robert E. Crowley, for concrete		122 40		
Philip Ginty, for slating.....		256 94		
Wm. E. Livingston, for cement, lime and sand		30 32		
Murdock Parlor Grate Co., for tiles		28		
D. M. Prescott, for mason work and material.....		98 81		
Samuel E. Snow, for mason work and material.....		511 18		
Staples Bros., for catch basin frame		4 00		
Walsh & Co., for plastering....		263 20		
E. A. Wilson & Co., for brick and lime.....		66 26		
E. A. Wilson, Agt., for brick and cement		62 63		
Courier-Citizen Co., for advertising.....		14 62		
Daily News Co., for advertising.		2 65		
F. Blanche Hard, for typewriting		3 79		
Hutchins Rubber Type Foundry, for checks and key rings...		2 50		
Lowell Daily Sun, for advertising.....		5 25		
Morning Mail Co., for advertising		12 00		
Tilton & Co., for stationery....		1 15		
Charles F. Coburn, for recording deed		65		
H. C. Church & Son, for insurance.....		45 00		
Thomas H. Elliott, for rent of land.....		37 50		
C. I. Hood, for Old Moody School House.....		14,000 00		
C. I. Hood, for insurance.....		9 70		
<i>Amounts carried forward</i>	\$	23,121 04	\$	37,220 71

<i>Amounts brought forward</i>	\$	23,121 04	\$	37,220 71
To Wm. T. True, for expenses ...		11 75		
E. P. Bryant, for repairing poker.....		50		
Cornelius Desmond, Agt., for shoeing		7 00		
J. C. Donovan, for repairing harnesses.....		1 25		
F. B. Hill & Co., for repairing carriages		48 30		
J. E. Conant & Co., for keeping horses		468 53		
D. J. Kelley, for teaming		4 00		
T. G. Little, for teaming.....		5 00		
D. F. Lyons, for teaming		4 00		
S. T. Moses, for teaming		2 00		
Wm. Roberts, for teaming.....		2 00		
N. Y. & B. Des. Ex. Co., for transportation		30		
		<hr/>	\$	23,675 67
Total expenditures for the year 1898.			\$	<hr/> 60,896 38

1897 BILLS.**Paid for SUNDRIES :**

To Thomas H. Elliott for rent of land	62 50		
Asphalt Roof Coating Co., for roofing	101 80		
H. R. Barker Manufacturing Co., for repairs.....	10 55		
J. E. Conant & Co., for keeping horses	44 28		
E. J. Carroll & Co., for fittings and labor	17 19		
Drury & Green, for fittings and labor	9 88		
Farrell & Conaton, for plumbing at Highland School	1,198 00		
Farrell & Conaton, for plumbing	108 32		
W. A. Mack & Co., for repairs	6 59		
James F. McElholm, for repairs	9 40		
	<hr/>		
<i>Amounts carried forward</i>	\$	1,568 51	\$ 60,896 38

Amounts brought forward..... \$ 1,568 51 \$ 60,896 38

To Pratt & Forrest, for lumber and
sash.....

17 38

Rice & Company, for wire cloth

3 85

Henry Reynolds, for shoeing...

9 15

Stickney & Austin, for specifica-
tions, etc.....

134 68

————— \$ 1,733 57

\$ 62,629 95

Balance to General Treasury Fund,

137 30

\$ 62,767 25

BARTLETT SCHOOL HOUSE.

Balance undrawn Jan. 1, 1898.....	\$	37 88	
Transferred from Appropriation for new School Houses.....		1,000 00	
		<hr/>	\$ 1,037 88

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for School Houses, for labor and ma- terial.....	\$	29 67	
Stickney & Austin, on account of plans and specifications..		490 05	
Middlesex Machine Co., for plumbing.....		483 16	
Weir Electric Co, for motor and connecting.....		35 00	
		<hr/>	\$ 1,037 88

CARTER STREET SCHOOL HOUSE.

Balance undrawn Jan. 1, 1898.....	\$	357 91	
Transferred from Appropriation for New School Houses.....		1,000 00	
		1,000 00	\$ 1,357 91

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for School Houses, for labor and material.....	\$	243 77	
Chelmsford Foundry Co., for iron beams.....		52 96	
T. Costello & Co., for tin, solder and labor.....		12 45	
Lewis D. Gumb, for labor.....		1 47	
J. H. Huntley, for repairing sash		2 25	
Joel Knapp & Son, for labor ..		2 75	
Edward D. Murphy, for repairs and changing windows.....		186 89	
Pratt & Forrest for sash.....		1 50	
Rice & Co., for wire cloth.....		11 17	
E. A. Wilson, Agt., for coal....		1 90	
Total Expenditure for the year 1898.....	\$		517 11
Balance carried forward			840 80
			840 80
	\$		1,357 91

MOODY STREET SCHOOL HOUSE.

Balance undrawn Jan. 1, 1898 \$	14,117 08	
Appropriation from General Treasury Fund	2,200 00	
	<hr/>	\$ 16,317 08

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for School Houses, for labor and material	\$	396 29
Appropriation for Water Works, for meter and connections		20 45
Sundry persons, for labor		1,064 47
Stickney & Austin, on account of plans, etc		213 79
Heirs of Henry Emery, for 30,400 sq. ft. of land		3,040 00
Charles F. Coburn, for recording deed		1 00
T. Costello & Co., for plumbing		708 37
Farrell & Conaton, for heating and ventilating		1,869 00
Robert Goulding & Son, for slating		870 00
P. O'Hearn, for foundation		247 28
Pratt & Forrest, for sash and windows		467 10
<i>Amount carried forward</i>	\$	8,897 75

<i>Amount brought forward</i>	\$	8,897 75
To Scott & O'Day, for gas piping..		55 00
E. G. Twohey, for carpenter work.....		2,997 56
James H. Walker, for brick work.....		650 00
James H. Walker, for plaster- tering.....		1,228 55
Howe Lumber Co., for lumber.		49 00
Amasa Pratt & Co., for lumber.		60 00
Pratt & Forrest for lumber....		80 90
Wm. H. Wiggin, for lumber..		3 08
Bartlett & Dow, for hardware.		23 48
Thompson Hardware Co., for hardware.....		90
F. B. Hill & Co., for tools and repairing....		3 40
W. A. Mack & Co., for metal work.....		173 00
Charles F. Morse, for connect- ing bells		24 90
Scannell & Wholey, for steel door, wrench and labor....		19 78
E. Bibault, for mason work and material....		27 50
Edward Cawley, for pipe.....		7 46
Staples Bros., for reducer.....		54
Adams & Co., for shades and fixtures.....		51 00
Chandler Adjustable Chair and Desk Co., for slate.....		236 16
C. B. Coburn & Co., for glass and brimstone.....		3 60
D. W. Horne & Son, for coal..		33 60
Stanley & Co., for wood.....		4 50
E. A. Wilson Agt., for coal....		36 05
Theo Beauchmin, for teaming..		1 25
Wm. Durham, for teaming....		1 25
T. G. Little, for teaming.....		5 00
Wm. Roberts, for teaming.....		5 00
N. Y. N. H. & H. R. R. Co., for transportation.....		29 97

Total Expenditure for the year 1898.
Balanae carried forward.....

14,710 18
1,606 90

\$ 16,317 08

ADDITION TO PLAIN STREET SCHOOL HOUSE.

Balance undrawn Jan. 1, 1898.....	\$	186 71	
		<u> </u>	\$ 186 71
Paid Appropriation for School Houses, for labor and material.	\$	155 22	
		<u> </u>	\$ 155 22
Balance to General Treasury Fund.			31 49
			<u> </u>
			\$ 186 71
			<u> </u>

ADDITION TO VARNUM SCHOOL HOUSE.

Balance undrawn Jan. 1, 1898.....	\$	17,906 50	
Appropriated from General Treasury		14,000 00	
		<hr/>	\$ 31,906 50
Received from H. R. Barker Mfg. Co., cash returned to Treasury.	\$	1,130 00	
		<hr/>	1,130 00
			<hr/>
	\$		33,036 50
			<hr/>

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	\$	3 00
Appropriation for School Houses for labor and material.....		693 78
Appropriation for Water Works for box, pipe, labor, water, etc.....		126 04
Arthur M. Burt, for plans, specifications and services.		300 00
Stickney & Austin, for plans and specifications for heat- ing and ventilating		165 34
Sundry persons, for labor.....		2,000 40
		<hr/>
Amount carried forward.....	\$	3,288 56

<i>Amount brought forward</i>	\$	3,288 56
To H. R. Barker Mfg. Co., for plumbing		3,689 56
James Burns, for slating.....		870 00
C. P. Conant, for carpenter work, windows, etc.....		1,181 33
C. P. Conant, for carpenter work, (contract).....		4,217 00
Conners Bros., for brick work..		1,800 00
T. Costello & Co., for metal work and gutters.....		1,334 95
Farrell & Conaton for heating apparatus.....		5,136 62
Joel Knapp & Son, for iron and steel work.....		1,508 50
George A. Lovejoy, for graining		58 25
James F. McElholm, for electrical work.. ..		17 75
Patrick O'Hearn, for foundation		378 40
Patrick O'Hearn, for mason work.....		235 87
Amasa Pratt & Co., for window frames, door frames and sash		1,580 00
Scannell & Wholey, for repairing plate		3 25
Tucke & Parker, for electrical work.....		734 00
James Walsh, for plastering...		1,875 00
Davis & Sargent, for lumber..		4 80
Wm. H. Wiggin, for lumber...		8 09
Wm. E. Livingston, for lime and sand....		2 20
E. A. & A. T. Smith, for concrete		424 34
E. A. Wilson, Agt., for brick...		35 45
C. B. Coburn & Co., for alcohol, preservative and brimstone.....		286 35
Adams and Co., for furniture, shades and fixtures.....		648 00
Chandler Adjustable Chair & Desk Co., for slate		411 44
O'Donnell & Gilbride Co., for furniture		26 25
Courier-Citizen Co., for advertising		10 75
<i>Amount carried forward</i>	\$	29,766 71

<i>Amount brought forward</i>	\$	29,766 71	
To Daily News Co., for advertising		4 88	
Lowell Daily Sun, for advertising.....		4 50	
Lowell Sunday Press, for advertising.....		1 87	
F. Blanche Hard, for typewriting.....		1 43	
Theo. Beauchmin, for teaming.		2 50	
Wm. Durham, for teaming.....		2 50	
T. G. Little, for teaming.....		20 50	
James Mullins, for teaming.....		36 00	
Wm. Roberts, for teaming.....		5 00	
N. Y. N. H. & H. R. R. Co., for transportation.....		36 13	
<hr/>			
Total Expenditure for the year 1898.....	\$	29,882 02	
Balance to General Treasury Fund	\$	2,200 00	
Balance carried forward.....		954 48	
		<hr/>	3,154 48
		<hr/>	<hr/>
		\$	33,036 50
		<hr/>	<hr/>

SEWER MAINTENANCE.

Annual Appropriation.....	14,000 00		
Additional Appropriation.....	1,426 29		
	<u> </u>	\$	15,426 29
Received from Appropriation for Sewer Construction, for labor.	\$ 660 38		
	<u> </u>		660 38
		\$	<u>16,086 67</u>

EXPENDITURES.

Paid for labor.....	\$ 9,718 33		
	<u> </u>	\$	9,718 33
Paid for LUMBER HARD- WARE etc.....			
To Burnham & Davis.....	\$ 23 09		
J. T. Carter & Co.....	8 64		
Wm. H. Kimball.....	75		
Pratt & Forrest.....	11 16		
Charles E. Adams.....	13 57		
Bartlett & Dow.....	144 08		
W. T. S. Bartlett.....	60		
Boutwell Bros.....	43 92		
H. B. Shattuck & Son.....	18 54		
	<u> </u>		
<i>Amounts carried forward.....</i>	\$ 264 35	\$	9,718 33

<i>Amounts brought forward</i>	\$	264 35	\$	9,718 33
To Thompson Hardware Co.....		94		
E. A. & A. T. Smith.....		12 00		
Staples Bros		15 30		
E. A. Wilson.....		15 81		
				<hr/> 308 40

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	806 49
Appropriations for Public Build- ings, for labor and material	2 18
Appropriation for streets, for services of Superintendent and keeping horses.....	1,442 78
Appropriations for Water Works, for water.....	193 16
Lowell Electric Light Corp., for lights.....	25 17
H. R. Barker Mfg. Co., for fit- tings.....	8 35
Barbour - Stockwell Co., for grates and frames.....	79 00
John Callaghan, for dippers and ladles	12 00
Edson Manufacturing Co., for diaphragms.....	21 10
Charles E. Gee, for labor and material.....	15 20
W. A. Mack & Co., for sewer ladles.....	20 40
Thomas Mather, for fittings....	4 38
Perrin Seamans & Co., for champs and tampers.....	27 46
Anson A. Reed, for Emery wheel dressers.....	5 00
Jerry Ryan, for solder and re- pairing can.....	1 50
Robert B. Seeton, for repairing valves.....	2 93
Scannell & Wholey, for iron hooks.....	2 60
Weir Electrical Co., for re- pairs ..	5 80
J. B. Cover & Co., for salt.....	4 00
C. B. Coburn & Co., for oil, packing, lanterns, etc.....	80 85

<i>Amounts carried forward</i>	\$	2,760 35	\$	10,026 73
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<i>Amounts brought forward</i>	\$	2,760 35	\$	10,026 73
To Crystal Oil Co., for oil.....		15 93		
A. R. Leighton, for milk.....		2 15		
Leighton Bros., for cans.....		2 25		
G. A. Leavens, for dynamite...		23 00		
Lowell Rubber Co., for boots and clothing.....		192 37		
E. Lavery, for repairing boots..		8 15		
O'Sullivan Bros., for rubber boots.....		34 50		
Hutchins Rubber Type Foundry Co., for stamp.....		60		
Thomas H. Lawler, for station- ery.....		15		
G. C. Prince & Son, for station- ery.....		1 75		
George A. Nelson, for photo- graphs.....		1 25		
Sampson, Murdock & Co., for directory.....		2 00		
Vox Populi Press, for print- ing.....		3 75		
A. E. Blanchard, for rebate re- mote drainage.....		50 22		
Jacques Boisvert, for rebate re- mote drainage.....		20 00		
Walter H. Hoyt, for rebate re- mote drainage.....		26 44		
Mrs. Gilbert Wright, for rebate remote drainage.....		100 43		
W. A. Dickinson, for use of land.....		100 00		
Honora O'Connor, for damages		50 00		
Samuel P. Pike, for award.....		300 00		
George F. Penniman, for land and damages.....		211 20		
W. H. Fuller, for use of pump		8 00		
Wm. E. Livingston, for coal...		20 32		
E. A. Wilson & Co., for coal...		12 03		
Laforrest Beals, for services....		28 00		
V. G. Barnard, for stamps.....		5 00		
J. F. Sullivan, for professional services.....		12 00		
O. P. Davis, for care of horse..		1 00		
Archibald Wheel Co., for wheels		166 67		
A. H. Cluer, for pads, bandages and repairs.....		45 40		
<i>Amounts carried forward</i>	\$	4,204 91	\$	10,026 73

<i>Amounts brought forward</i>	\$	4,204 91	\$	10,026 73
To H. F. Ebert, for repairing harness		1 50		
H. L. Newhall, for buggy,.....		65 00		
Charles Clapp, for teaming.....		138 00		
C. H. Hanson & Co., for teaming		14 00		
E. A. Wilson, for teaming.....		7 25		
American Express Co., for transportation		15		
B. & L. Des. Ex. Co., for transportation.....		1 75		
B. & M. R. R., for transportation		9 17		
Morse Coach Co., for carriage hire		3 00		
		<hr/>		4,444 73
Total Expenditure for the year 1898.....			\$	<hr/> 14,471 46

1897 BILLS.Paid for **SUNDRIES** :

To Appropriation for Engineering, for engineering	\$	32 50		
Appropriation for Water Works for pipe and labor.....		139 45		
Crystal Oil Co., for oil.....		2 81		
Doherty Bros., for castings....		16 53		
Daniel M. Dane, for rebate remote drainage		20 96		
Lowell Electric Light Corp., for lights.....		53		
Lowell Rubber Co., for coat...		3 60		
E. Lavery, for repairing rubber boots		1 75		
G. A. Leavens, for dynamite...		23 00		
Wm. E. Livingston, for cement.		4 90		
Staples Bros., for pipe.		1,176 73		
Wm. H. Wiggin, for lumber...		3 53		
		<hr/>		1,426 29
			\$	<hr/> 15,897 75
Balance to General Treasury Fund				188 92
			\$	<hr/> 16,086 67

SEWER CONSTRUCTION.

Annual Appropriation.....	\$	75,000 00
Additional Appropriation.....		30,000 00
		\$ 105,000 00

EXPENDITURES.

Paid for SUNDRIES:

To Appropriation for Engineer- ing, for engineering.....	\$	1,554 49
Appropriation for Mayor's De- partment, for railroad tick- ets.....		14 52
Appropriation for Sewer main- tenance, for labor and ma- terial.....		660 38
Appropriation for Streets, for labor, material and ser- vices of Superintendent...		775 24
Appropriation for Water Works, for water.....		58 00
Appropriation for Watering Streets, for teaming.....		31 50
Sundry persons, for labor.....		79,167 38
Lowell Electric Light Corp., for lights.....		1 50
Est. A. P. Bateman, for lumber.		28 80
Burnham & Davis, for lumber..		401 97
		82,693 78
Amount carried forward.....	\$	82,693 78

<i>Amount brought forward</i>	\$	82,693 78
Horace P. Beals, for lumber....		121 89
Davis & Sargent, for lumber...		94 22
Howe Lumber Co., for lumber.		60 99
Wm. H. Kimball, for lumber and labor.		8 63
Amasa Pratt & Co., for lumber.		242 41
Pratt & Forrest, for lumber...		308 32
Wm. H. Wiggin, for lumber...		364 96
Charles E. Adams, for hard- ware.....		14 38
Bartlett & Dow, for hardware and tools.....		250 74
W. T. S. Bartlett, for hardware and tools.....		96 50
Boutwell Bros., for iron and spokes		9 17
Thompson Hardware Co., for hardware and rope.....		25 48
H. R. Barker Mfg. Co., for pipe, fittings, labor, etc.....		19 55
Lyman M. Coburn, for sharpen- ing tools.....		17 30
Concord Foundry Co., for cast- ings.		66 00
Doherty Bros., for castings....		1,934 04
Firth-Sterling Steel Co., for steel		39 20
Thomas Mather, for valves, hose, labor, etc.....		19 54
Scannell & Wholey, for repair- ing pump handle.....		75
Tucke & Parker, for wire.....		4 50
H. H. Wilder & Co., for labor..		1 50
Weir Electric Co., for wire....		4 70
Edward Cawley, for pipe.....		5,954 52
Fox & Engel, for pipe.....		998 52
E. A. Wilson, Agt., for brick and cement..		6,750 62
E. A. Wilson & Co., for brick and cement.....		1,446 40
E. A. Wilson, for cement.....		10 23
C. B. Coburn & Co., for lime, oil, etc.....		205 96
Crystal Oil Co., for oil.....		27 98
G. A. Leavens, for dynamite and exploders		1,151 45
J. B. Cover & Co., for oat meal		23 04
<i>Amount carried forward</i>	\$	102,957 27

<i>Amount brought forward.....</i>	102,957 27	
To T. J. McDonald, for oat meal..	12 75	
E. N. Wood & Co., for oat meal	48 90	
E. Lavery, for repairing rubber boots	3 30	
Lowell Rubber Co., for diaphragm and hose.....	66 82	
O'Sullivan Bros., for rubber boots.....	14 00	
W. H. Boody, for refreshments.	5 00	
Hotel Belvidere, for refreshments.....	6 00	
Richardson's Hotel, for refreshments.....	6 00	
Courier-Citizen Co., for blank book.....	1 75	
Dumas & Co., for time books...	15 50	
Connors Bros., for right of constructing sewer through land on Plain St.....	1,000 00	
Charles F. Coburn, for recording deed.....	75	
Est. Jos. Evans, for right of way for sewer to Wilder Street	215 04	
Morse Coach Co., for carriage hire	18 00	
Charles Clapp, for teaming and use of horse.....	589 00	
C. H. Hanson & Co., for teaming	15 00	
American Express Co., for transportation.....	1 20	
B. & M. R. R., for transportation	2 41	
Total Expenditure for the year 1898.....		\$ 104,988 69
Balance to General Treasury Fund.....		11 31
		<u>\$ 105,000 00</u>

STREET DEPARTMENT.

Annual Appropriation.....	\$	130,000	00	
Additional Appropriation.....		11,287	47	
		<u> </u>		\$ 141,287 47

RECEIPTS.

From Sundry Departments, for
board of horses, labor, ma-
terial, etc., as follows :

Bicycle Path, Bridge Street..	\$	60	00	
Commons.....		15	50	
Engineering		18	75	
Extension of Aiken Street....		5	56	
Paving Chelmsford Street...		1,356	73	
Paving Gorham street.....		1,910	86	
Public Buildings.....		86	15	
School Houses.....		132	10	
Sewer Construction		775	24	
Sewer Maintenance.....		1,442	78	
Supply.....		162	20	
Watering Streets.....		910	66	
Widening Andover Street....		2,165	76	
Sundry persons, cash returned to Treasury		152	39	
		<u> </u>		9,194 68
				<u> </u>
	\$	150,482	15	
		<u> </u>		

EXPENDITURES.

Paid SUPERINTENDENT OF
STREETS :

To George L. Fowler, salary.....	\$	59 14	
Cleveland J. Cheney, salary...		1,940 86	
		<hr/>	\$ 2,000 00
Paid Sundry persons, for labor	\$	99,998 44	
		<hr/>	99,998 44

Paid for FUEL :

To C. Constantineau, for weighing coal.....	\$	1 13	
Daniel Gage.....		173 44	
D. W. Horne & Son.....		488 89	
Wm. E. Livingston.....		154 04	
E. A. Wilson, Agt.....		343 01	
E. A. Wilson & Co.....		223 99	
		<hr/>	1,384 50

Paid for HAY, GRAIN, etc. :

To Blake & Wood.....	\$	499 24	
A. D. Boynton.....		63 99	
Joseph Bowers.....		27 85	
J. B. Cover & Co.....		21 52	
J. F. Denning.....		136 36	
G. M. Foster.....		998 54	
Eben T. Fox.....		96 28	
C. H. Hanson & Co.....		440 37	
G. G. Kelly.....		89 15	
Wm. E. Livingston.....		958 40	
James Meek.....		745 60	
T. J. McDonald.....		12 75	
E. S. Sherman.....		605 30	
C. G. Thurston.....		153 97	
Vigeant, Dumas & Co.....		240 45	
E. N. Wood & Co.....		471 89	
		<hr/>	5,561 66

Paid for LUMBER, STONE,
BRICK, CEMENT, etc. :

To Est. A. P. Bateman.....	\$	29 50	
Horace P. Beals.....		1,078 58	
Burnham & Davis.....		129 23	
		<hr/>	
Amounts carried forward.....	\$	1,237 31	\$ 108,944 60

<i>Amounts brought forward</i>	\$	1,237 31	\$	108,944 60
To Davis & Sargent.....		98 75		
Daniel Gage.....		1 00		
E. E. Galer.....		2 00		
C. M. Holmes.....		75		
Howe Lumber Co.....		101 00		
Wm. H. Kimball.....		68 46		
Pratt & Forrest.....		19 50		
Wm. H. Wiggin.....		495 46		
W. H. Brown.....		1,699 83		
J. M. Butman.....		90 60		
Boston Paving Co.....		254 02		
Conners Bros.....		221 50		
P. S. Carkins.....		262 51		
Edward Cawley.....		10 66		
H. N. Fletcher.....		45 00		
H. E. Fletcher & Co.....		632 01		
F. H. Farmer.....		362 50		
Asa Goddard.....		16 20		
Jere J. Hayes.....		17 00		
J. F. Holden.....		150 80		
Lawrence E. Lynch.....		114 00		
John Marinell.....		34 80		
George W. McIntire.....		9 40		
F. A. Malorey.....		5,340 98		
Massachusetts Broken Stone Co		2,282 02		
P. O'Hearn.....		1 85		
O. R. Park.....		129 73		
Lewis P. Palmer and Cyrus Barton.....		485 36		
Rowena Reed.....		48 72		
E. A. and A. T. Smith.....		3,261 98		
John A. Simpson.....		8 56		
P. Teague.....		10 00		
E. A. Wilson & Co.....		140 46		
		<hr/>		
				17,654 72

Paid for HARDWARE, TOOLS,
etc.:

To American Bolt Co.....	\$	10 00		
Isidore Augustine.....		16 50		
Charles E. Adams.....		103 93		
Ames Plow Co.....		52 17		
Bartlett & Dow.....		776 69		
W. T. S. Bartlett.....		18 88		
J. C. Bennett.....		4 50		
		<hr/>		
<i>Amounts carried forward</i>	\$	982 67	\$	126,599 32

Amounts brought forward..... \$ 982 67 \$ 126,599 32

To Buffalo-Pitts Co., Steam Road

Roller	3,112 00
Globe File Works.....	6 25
Good Roads Machinery Co....	162 50
Highland Globe File Co.....	2 00
W. H. Hope & Co.....	2 20
A. F. Nichols.....	3 96
Pevey Bros.....	4 66
Anson A. Reed.....	5 00
H. B. Shattuck & Son.....	27 75
Thompson Hardware Co.....	28 43

4,337 42

Paid for HORSES, CARRIAGES, HARNESSES, etc:

To Abbott Downing Co..... \$	6 00
Archibald Wheel Co.....	9 36
Israel Bent.....	68 19
Boutwell Bros.....	551 21
A. L. Butman.....	75
Willard A. Brown.....	20
A. H. Cluer.....	166 79
J. C. Donovan.....	27 52
H. F. Ebert.....	17 45
C. H. Hanson, Jr.....	7 50
E. P. Bryant... ..	1 00
F. B. Hill & Co.....	139 70
Sawyer Carriage Co.....	16 30
Charles Clapp.....	200 00
Charles T. Fish.....	175 00
Charles H. Hanson & Co.....	200 00
Owen J. Carney.....	6 00
Robert B. Seeton.....	2 25

1,595 22

Paid for LAND, DAMAGES,
etc.:

To C. L. Adams..... \$	450 00
P. E. Beaudette	175 00
Martha Chadwick.....	900 00
Catherine Guthrie, Admx. Est.	
Sarah A. Guthrie.....	48 30
Matthew Gourley... ..	7 65
Richard Gumb and Henry M. Gumb.... ..	33 00

Amounts carried forward..... \$ 1,613 95 \$ 132,531 96

<i>Amounts brought forward</i>	\$	1,613 95	\$	132,531 96
Heirs Justice Nolte		750 00		
Charles F. Kappier.....		18 60		
Margaret Lee.....		100 00		
Ellen Neaton.....		400 00		
Honora O'Connor.....		50 00		
George E. Pierce.....		60 00		
Catherine Rogers.....		100 00		
George T. Spence.....		12 15		
Richard J. Sparks.....		400 00		
—— Sheldon.....		600 00		
Aaron Stackpole, Jr., for royalty due on street sweepers....		400 00		
Charles F. Coburn, for recording deed and release.....		1 00		
		<hr/>		4,505 70

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering	\$	3,675 99		
Appropriation for Paving Gor- ham Street, for overcharge.		521 36		
Appropriation for Watering Streets, for labor and team- ing		764 00		
Appropriation for Water Works for water		188 73		
Lowell Electric Light Corp., for lights		154 83		
Lowell Gas Light Co., for gas..		121 00		
N. E. Tel. and Teleg. Co., for service		198 36		
Achille Auctil, for sharpening drills.....		2 44		
H. R. Barker Mfg. Co., for fit- tings, labor, etc.....		18 75		
Barbour-Stockwell Co., for frames and grates		13 50		
Daniel Cushing & Co., for spar- row pans		6 00		
E. J. Carroll & Co., for solder and labor		2 50		
John Callaghan, for pans.....		20 40		
Josiah Gates & Sons, for lacings		1 00		
Charles E. Gee, for repairs.....		255 30		
		<hr/>		
<i>Amounts carried forward</i>	\$	5,944 16	\$	137,037 66

<i>Amounts brought forward</i>	\$	5,944 16	\$	137,037 66
Lowell Wire Works, for wire work		4 61		
Lowell Steam Boiler Works, for castings.....		6 30		
Mds'x Machine Co., for pipe and fittings.....		3 48		
W. McLarney & Co., for repairs.....		15 97		
A. Nourborn, for labor and material.....		15 60		
David A. Polley, for labor and material.....		22 30		
Robert B. Seeton, for repairing valves.....		9 50		
S. C. Smith, for screws.....		25		
J. W. Stewart, for solder and labor.....		2 00		
Steele & Condict, for crusher plates.....		60 00		
Alvin Thompson, for numbers..		25 90		
H. H. Wilder & Co., for tubing, solder and labor.....		11 09		
Charles E. Adams, for spirits turpentine.....		1 02		
E. W. Brown, for broom material.....		9 10		
W. Brown, for broom material		9 42		
C. B. Coburn & Co, for oil, paint, brushes, etc.....		346 22		
Charles E. Carter, for medicine.....		2 95		
Crystal Oil Co., for oil.....		41 25		
Walter Coburn & Co., for waste.....		7 00		
Donovan & Co., for soap.....		47		
Eagle Oil Supply Co., for polish		3 75		
Ellingwood & Co., for medicine.....		3 50		
J. F. Fuller & Co., for medicine.....		4 00		
Daniel Gage, for ice.....		19 05		
Humphrey's Homeopathic Medicine Co., for medicine....		26 00		
W. S. Heald, for broom material.....		3 00		
Hudson Oil Co., for oil		1 50		
<i>Amounts carried forward</i>	\$	6,599 39	\$	137,037 66

<i>Amounts brought forward</i>	\$	6,599 39	\$	137,037 66
To P. M. Jefferson & Co., for soap.....		10 00		
A. L. Kittredge & Co., for oil, etc.....		8 45		
G. A. Leavens, for dynamite and exploders.....		496 48		
A. R. Leighton, for milk.....		8 10		
Wm. Nichols & Co., for caps and fuse.....		2 20		
Talbot Dyewood & Chemical Co., for spirits nitre, jug, etc.....		5 75		
John Cross, for bunting and duck.....		5 70		
A. F. Frost's Steam Laundry, for laundering.....		10 50		
Mrs. James Fisher, for making and repairing flags.....		1 25		
F. E. Gibney & Co., for street signs		95 00		
Hickory Brown Fibre Co., for refilling brooms.....		100 00		
L. W. Hawkes, for hair.....		4 00		
L. S. Kimball, for belting.....		7 50		
Lowell Rubber Co., for duck...		2 00		
E. Lavery, for repairing boots..		2 25		
A. G. Pollard & Co., for ticking		4 52		
H. Thompson, for brooms.....		28 00		
Henry Whiting, for lacing, dressing and punch.....		2 85		
Ballard & Kirschbaum, for rent of telephone indexes.....		3 00		
Courier-Citizen Co., for printing and advertising.....		14 00		
Daily News Co., for advertising		3 40		
Hutchins Rubber Type Foundry for stamps.....		2 25		
Thomas H. Lawler, for station- ery and stamps.....		21 60		
Lowell Sun, for printing.....		48 66		
J. Merrill & Son, for stationery		1 75		
Morning Mail Co., for advertis- ing		21 75		
George A. Nelson, for photo- graphs		1 00		
G. C. Prince & Son, for station- ery		6 05		
<i>Amounts carried forward</i>	\$	7,517 40	\$	137,037 66

Amounts brought forward..... \$ 7,517 40 \$ 137,037 66

To Sampson, Murdock & Co., for directory.....	2 00
Vox Populi Press, for printing.....	3 75
D. H. Anderson, for bridge on Wilder St.....	750 00
H. E. Fletcher, for cut stone for bridge on Wilder Street...	166 00
Charles Runnels for labor on Wilder Street bridge.....	34 86
W. H. Fuller, for estimating cost of work on White St..	10 00
Prop's. of Locks & Canals, for repairing bridge at Merrimack and Suffolk Streets..	333 39
Samuel E. Snow, for mason work and material.....	14 69
Town of Dracut fortaxes of 1898	25 63
E. G. Baker, for measuring and inspecting lumber.....	11 00
Thomas C. Lee, for insurance...	200 00
Mrs. A. B. McQuade, for pasturing horses.....	18 00
W. H. Boody for refreshments.	28 00
Merrimac House, for refreshments.....	47 00
C. E. Munn, for professional services.....	2 00
J. H. Sparks, for professional services.....	31 00
E. H. Morse, for carriage hire..	13 00
Morse Coach Co., for carriage hire.....	35 00
J. H. Sparks, for carriage hire..	27 00

Sundry persons for teaming as follows:

B. G. Brown.....	133 00
Jacques Boisvert.....	60 00
B. M. Blake.....	114 00
A. D. Boynton.....	118 00
A. W. Cheney.....	74 00
Charles Clapp.....	364 50
P. P. Connors & Co.....	23 00
E. Duren.....	111 00
Frank Dunlap.....	24 00

Amounts carried forward..... \$ 10,291 22 \$ 137,037 66

<i>Amounts brought forward</i>	\$ 10,291 22	\$ 137,037 66
To Frank Fay.....	32 00	
George F. Falls.....	29 00	
H. W. Foster.....	56 00	
George Gaudette.....	100 00	
C. A. Gilman.....	135 28	
C. H. Hanson & Co.....	120 25	
James Hickey.....	34 00	
Joseph Loiselie.....	122 00	
D. F. Lyons.....	115 00	
A. Leblanc.....	222 00	
Avery Marshall.....	80 00	
James Mullin.....	260 00	
P. O'Hearn.....	73 00	
Pratt & Forrest.....	30 00	
O. F. Prentiss.....	8 00	
J. M. Pinder.....	86 00	
G. E. Stanley.....	285 00	
John A. Simpson.....	86 00	
F. E. Stowell.....	218 00	
George Tremblay.....	10 00	
Benjamin Vincent.....	104 00	
E. A. Wilson.....	2 40	
E. N. Wood & Co.....	38 00	
R. Welch.....	26 00	
Wm. H. Wiggin.....	36 00	
American Express Co.....	4 90	
B. & L. Des. Ex. Co.....	25	
B. & M. R. R.....	31 46	
N. Y. N. H. & H. R. R. Co...	9 25	
	<hr/>	\$ 12,645 01
Total Expenditure for the year		<hr/> \$ 149,682 67

1897 BILLS.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering and use of horse.....	\$ 69 25
Appropriation for Water Works, for water.....	50 70

<i>Amounts carried forward</i>	\$ 119 95	\$ 149,682 67
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<i>Amounts brought forward</i>	\$	119 95	\$	149,682 67
To Thomas H. Elliott, for rent. . .		126 00		
J. B. Bailey, for hay.....		58 60		
B. & L. Des. Ex. Co., for transportation.....		15		
B. & M. R. R., for transportation.....		8 54		
H. R. Barker Mfg. Co., for pipe, fittings, labor, etc.....		66 18		
Boutwell Bros., for iron.....		11 68		
J. M. Butman, for filling.....		26 70		
C. Clough, for filing saws.....		2 15		
A. F. Frost's Steam Laundry..		1 26		
H. E. Fletcher & Co., for stone		58 76		
Lewis D. Gumb, for stone chips		15 75		
Charles T. Haskell, for filing saws.....		8 07		
Wm. H. Kimball, for labor.....		1 00		
L. S. Kimball, for leather.....		11 25		
Lowell Gas Light Co., for gas..		2 70		
Lowell Electric Light Corp., for lights.....		9 36		
Thomas Mather, for pipe and fittings.....		1 73		
James Meek, for grain.....		28 60		
J. Merrill & Son, for blank books		9 00		
A. H. McCann, for professional services.....		13 50		
W. A. Mack & Co., for pipe....		1 68		
N. E. Tel. & Teleg. Co., for service.....		14 38		
Pevey Bros., for castings.....		74 75		
A. G. Stiles & Co., for meal and shorts.....		22 00		
H. B. Shattuck & Son, for hardware, tools.....		7 75		
Staples Bros., for pipe.		59 84		
J. H. Sparks, for professional services.....		2 00		
Alvin Thompson, for numbers..		9 19		
Thompson Hardware Co, for hardware.....		85		
Wm. H. Wiggin, for lumber...		14 20		
Charles R. Wood, for professional services.....		5 50		
	—————	\$	793 07	
			150,475 74	
Balance to General Treasury Fund.....			6 41	
			150,482 15	

BICYCLE PATH, BRIDGE STREET.

Appropriated from General Treasury		
Fund	\$ 925 000	
	<u> </u>	\$ <u>925 00</u>

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Streets, for		
teaming	\$ 60 00	
Appropriation for Water		
Works, for water	3 62	
Sundry persons for labor	492 43	
G. S. Griggs, for gravel	37 80	
Sherman & Martin, for stone...	34 00	
E. A. Wilson & Co., for cement	130 20	
B. G. Brown, for teaming	91 00	
	<u> </u>	
Total Expenditure for the year		
1898	\$	849 05
Balance carried forward		75 95
		<u> </u>
	\$	<u>925 00</u>

EXTENSION OF AIKEN STREET.

Balance undrawn Jan. 1, 1898.....	\$	10,083 57		
		<hr/>	\$	10,083 57
Sundry persons, cash returned to Treasury		21 00		
		<hr/>		21 00
			<hr/>	
			\$	10,104 57
			<hr/>	
			<hr/>	

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	\$	364 52
Appropriation for streets, for sharpening tools.....		5 56
Sundry persons, for labor.....		691 63
John E. Cheney, for plans and specifications of bridge superstructure		140 30
Halstead & McNaughr, for in- spection of bridge work....		66 74
Frank R. Long & Co., for bridge		5,612 00
W. H. Ward, for stone work...		2,516 55
Wm. H. Kimball, for lumber and labor.....		37 15
Wm. H. Wiggin, for lumber...		24 63
		<hr/>
<i>Amount carried forward.....</i>	\$	9,459 08

<i>Amount brought forward</i>	\$	9,459 08	
To Lewis P. Palmer, for paving blocks		489 38	
Thomas Roark, for painting....		10 00	
Lowell Daily Sun, for advertis- ing		6 00	
Morning Mail Co., for advertis- ing		8 25	
<hr/>			
Total Expenditure for the year 1898.....	\$	9,972 71	
Balance to General Treasury Fund.....		131 86	
<hr/>			
	\$	10,104 57	
<hr/>			

To this amount add the sum of \$16.43, expended in 1897—making total cost of Extension of Aiken Street, \$9,989.14.

EXTENSION OF AIKEN STREET TO MERRIMACK STREET.

Appropriated from General Treasury			
Fund	\$	30,100 00	
		<u> </u>	\$ 30,100 00
Balance undrawn Dec. 31, 1898....	\$	30,100 00	
		<u> </u>	\$ 30,100 00
			<u> </u>

EXTENSION OF BEECH STREET.

Appropriated from General Treasury Fund	\$ 5,968 87	
	<hr/>	\$ 5,968 87
Paid sundry persons, for labor.....	\$ 1,187 43	
	<hr/>	\$ 1,187 43
Balance carried forward.....		4,781 44
		<hr/>
		\$ 5,968 87
		<hr/>

EXTENSION OF LUNDBERG STREET.

Appropriated from General Treasury		
Fund	\$ 25,000 00	
	<u> </u>	<u>\$ 25,000 00</u>

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	\$ 313 87	
Cyrus Barton, for foundation (contract)	3,632 68	
John E. Cheney, for specifica- tions and detail plans of superstructure	141 55	
Courier-Citizen Co., for adver- tising	21 00	
Daily News Co., for advertising	6 50	
Morning Mail Co., for advertis- ing	9 25	
	<u> </u>	
Total Expenditure for the year 1898.....		\$ 4,124 85
Balance carried forward.....		20,876 15
		<u> </u>
		<u>\$ 25,000 00</u>

PAVING AIKEN STREET.

Appropriated from General Treasury Fund.....	\$	13,000 00		\$	13,000 00
					<u>13,000 00</u>

EXPENDITURES.

Paid for SUNDRIES:

To Sundry persons for labor.....	\$	75 75	
Appropriation for Engineering, for engineering.....		208 75	
Dunn Bros., for asphaltina (contract.....		1,800 00	
		<u>1,800 00</u>	
Total Expenditure for the year 1898.....	\$	2,084 50	
Balance carried forward.....		10,915 50	
		<u>10,915 50</u>	
	\$	13,000 00	
		<u>13,000 00</u>	

PAVING CHELMSFORD STREET.

Appropriated from General Treasury Fund	\$ 9,000 00	
	<hr/>	\$ 9,000 00
Received from Thomas Kerwin, for overdraft.	12 00	
	<hr/>	12 00
		<hr/>
		\$ 9,012 00
		<hr/>

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering	\$ 18 50	
Appropriation for Streets, for labor and material	1,356 73	
Sundry persons, for labor	1,538 27	
W. H. Brown, for stone	868 09	
P. A. Carlin, for paving blocks	1,062 95	
H. E. Fletcher & Co., for paving blocks	1,125 75	
E. A. Wilson & Co., for cement	42 78	
	<hr/>	
Total Expenditure for the year 1898		\$ 6,013 07
Transferred to General Treasury fund		2,998 93
		<hr/>
		\$ 9,012 00
		<hr/>

PAVING GORHAM STREET.

Appropriation from General Treasury	\$	15,500 00	
Additional Appropriation.....		5,800 00	
			\$ 21,300 00
Received from Appropriation for			
Streets, for labor, material, etc.	\$	521 36	
			521 36
			\$ 21,821 36

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering,			
for engineering.....	\$	330 99	
Appropriation for Streets, for			
labor and material....		1,910 86	
Boston Paving Co., for asphalt-			
ina paving.....		19,275 80	
George A. Nelson, for photo-			
graphs		5 25	
Charles Runels, for stone.....		49 30	
Total Expenditure for the year			
1898	\$		21,572 20
Balance to General Treasury			
Fund.....			249 16
			\$ 21,821 36

PAVING WESTFORD STREET.

Appropriated from General Treasury fund.....	\$ 11,000 00	
	<u> </u>	\$ 11,000 00
Paid Lowell Daily Sun for advertising.....	\$ 7 00	
	<u> </u>	\$ 7 00
Balance carried forward.....		10,993 00
		<u> </u>
		<u>\$ 11,000 00</u>

WIDENING ANDOVER STREET.

Appropriated from General Treasury Fund.....	\$ 35,000 00	
	<hr/>	35,000 00
Received from Thomas Joyce, cash returned to Treasury.....	\$ 10 50	
	<hr/>	10 50
		<hr/>
		\$ 35,010 50
		<hr/>

EXPENDITURES.

Paid for SUNDRIES:

To Appropriation for Engineering, for engineering.....	\$ 115 87
Appropriation for Streets, for teaming, coal and brick...	2,165 76
Sundry persons, for labor.....	7,560 37

Sundry persons, for land and damages as follows:

Robert G. Bartlett.....	130 00
Merrimack Manufacturing Co..	620 00
Colin McDonald.....	125 00
James E. Nesmith.....	700 00
James E. and Mary Nesmith, et. als.....	4,000 00
Alfred E. Rose.....	1,400 00
	<hr/>

Amount carried forward..... \$ 16,817 00

<i>Amount brought forward</i>	\$	16,817 00	
To Whittet & McDonald		800 00	
Edward Cawley, for pipe		28 74	
F. H. Farmer, for stone		83 75	
Mass. Broken Stone Co., for stone		1,341 32	
E. A. Wilson & Co., for brick and cement		115 19	
E. A. Wilson, for brick		14 60	
Doherty Bros., for castings		77 39	
George A. Nelson, for pictures		13 50	
Lowell Daily Sun, for adver- tising		6 00	
Morning Mail Co., for advertis- ing		8 25	
Vital Roberts, for teaming		9 00	
<hr/>			
Total Expenditure for the year 1898	\$	19,314 74	
Balance carried forward		15,695 76	
<hr/>			
	\$	35,010 50	
<hr/>			

SOLDIERS' RELIEF.

Annual Appropriation.....	\$	9,000 00		
Additional Appropriation.....		84 07		
		<u> </u>	\$	9,084 07
Received from sundry persons, cash returned to Treasury.....	\$	34 00		
		<u> </u>		34 00
			\$	<u>9,118 07</u>

EXPENDITURES.

Paid sundry persons, Soldiers' Relief, for 1898.....	\$	4,235 00		
		<u> </u>	\$	4,235 00
Paid for FUEL, PROVISIONS, etc. :				
To W. H. Brown.....	\$	73 00		
C. C. Bachelder.....		50 00		
Fred M. Barney & Co.....		94 00		
Banner Market.....		160 86		
Buttrick & Co.....		34 00		
J. S. Brooks.....		42 00		
Breen Bros.....		5 00		
S. K. Chase.....		63 00		
Currier & Bachelder.....		10 00		
Frost Avenue Market.....		60 00		
John Flynn.....		13 50		
		<u> </u>		
Amounts carried forward.....	\$	605 36	\$	<u>4,235 00</u>

<i>Amounts brought forward</i>	\$	605 36	\$	4,235 00
Daniel Gage.. .. .		1 84		
Daniel S. Gray.....		204 56		
W. T. Griffin.....		60 26		
Edward P. Hutchins.....		1 00		
H. Hermanson & Co.....		15 00		
Wm. Kittredge Co.....		67 60		
Keefe Bros.....		364 56		
P. Keyes, Jr.....		12 00		
Lowell Gas Light Co.....		13 50		
Alfred Leblanc.....		216 00		
H. W. Locke.....		123 05		
George Lynch.....		173 95		
Merrimack Clothing Co.....		6 25		
O'Sullivan Bros.....		15 50		
C. F. O'Neil.....		58 22		
Wm. H. Parker & Sons.....		77 00		
A. G. Pollard & Co.....		1 50		
J. P. Robinson.....		40 98		
O. B. Ranlett.....		53 00		
Ranlett & Ranlett.....		21 00		
J. B. Richardson's Sons.....		10 00		
Rourke & Sullivan.....		14 63		
C. E. Smart & Son.....		7 00		
Stanley & Co.....		137 17		
P. P. Stiles & Co.....		274 28		
F. A. Strout.....		165 12		
Charles F. Smith.....		60 00		
M. A. Taylor.....		113 66		
Taylor & Thompson.....		99 12		
Whitney Bros.....		4 18		
Whipple Street Market.....		1 92		
E. A. Wilson Agt.....		9 20		
				3,028 41

Paid for SUNDRIES:

To Henry and William Miller, for rent.....	\$	42 50
Parker Estate, for rent.....		57 50
James E. Leary, for professional services.....		29 00
Charles H. Ricker, for profes- sional services.....		5 00
Lowell General Hospital, for aid rendered Maria Ken- nedy.....		14 00

<i>Amounts carried forward</i>	\$	148 00	\$	7,263 41
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<i>Amounts brought forward</i>	\$	148 00	\$	7,263 41
St. John's Hospital, for aid to Morgan Morgans.....		16 50		
City of Cambridge for aid to Michael Sheridan and family		72 00		
City of Taunton, for aid to Ed- ward Cary.....		1 00		
Courier-Citizen Co., for printing Appropriation for City Cem- eteries, for opening grave..		1 75		
		2 00		
Sundry persons, for interments, as follows:				
J. W. Brooks..		35 00		
Peter Davey.....		64 00		
J. H. DeMermott.....		41 50		
Charles H. Molloy.....		35 00		
James F. O'Donnell.....		105 00		
John F. Rogers.....		70 00		
Peter H. Savage.....		70 00		
C. M. Young & Co.....		131 00		
John A. Weinbeck.....		70 00		
		<hr/>	\$	862 75
Total Expenditure for the year 1898.....			\$	8,126 16

1897 BILLS.

Paid for SUNDRIES:

To S. K. Chase, for provisions.....	\$	5 00		
W. T. Griffin, for wood.....		8 18		
H. W. Locke, for groceries....		5 00		
Charles H. Molloy, for inter- ment		35 00		
Henry & William Miller, for rent.....		5 00		
Edward F. Purcell, for wood...		2 00		
Charles F. Smith, for groceries.		10 00		
Stanley & Co., for fuel.....		5 60		
		<hr/>		
<i>Amounts carried forward</i>	\$	76 23	\$	8,126 16

<i>Amounts brought forward</i>	\$	76 23	\$	8,126 16
E. A. Wilson, Agt., for coal . . .		1 84		
Whipple Street Market, for groceries		6 00		
		<hr/>	\$	84 07
				<hr/>
				8,210 23
Balance to General Treasury Fund				907 84
				<hr/>
			\$	9,118 07
				<hr/>

SOLDIERS' AND SAILORS' MEMORIAL TABLETS.

Appropriated from General Treasury Fund	\$	500 00	
Additional Appropriation.....		1,700 00	
		-----	\$ 2200 00

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Mayor's Department, for railroad tickets.....	\$	8 51	
Appropriation for Public Buildings, for labor and material		18 45	
Arthur F. Salmon, Clerk.....		231 25	
Arthur F. Salmon, for expenses		80 44	
Andrews & Wheeler, for tablets		820 73	
Spencer & Co., for gilding.....		1 50	
Courier-Citizen Co., for advertising		7 00	
Daily News Co., for advertising		4 00	
Lowell Sunday Press, for advertising.....		6 50	
Lowell Daily Sun, for advertising.....		2 00	
Morning Mail Co., for advertising		6 00	

Total Expenditure for the year 1898.....	\$		1,186 38
Balance carried forward.....			1,013 62

	\$		2,200 00

STATE AID.

Annual Appropriations.....	\$ 15,000 00	
	<hr/>	\$ 15,000 00
Received from sundry persons cash returned to Treasury.....	\$ 106 50	
	<hr/>	106 50
		<hr/>
		\$ 15,106 50
		<hr/>
Paid sundry persons, State aid for 1898.....	\$ 14,813 00	
	<hr/>	\$ 14,813 00
Balance returned to General Treas- ury		293 50
		<hr/>
		\$ 15,106 50
		<hr/>

STATE AID OFFICE EXPENSES.

Annual Appropriation.....	\$	1,725 00
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	\$	1,725 00
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EXPENDITURES.

Paid for SUNDRIES:

To Hubert M. Potter, Superintendent... ..		1,033 50
Mary C. Brennan, Assistant Superintendent.....		530 00
Arthur F. Salman, Clerk.....		15 00
Appropriation for City Treasurer, for use of telephone..		30
Hubert M. Potter, for office expenses.....		48 65
V. G. Barnard, for stamps.....		8 00
N. E. Tel. & Teleg. Co., for service.....		9 72
Dumas & Co., for blank book..		7 25
Courier-Citizen Co., for stationery.....		6 25
Thomas H. Lawler, for stationery.....		6 95
G. C. Prince & Son, for stationery.....		3 88
M. G. Wight & Co., for blank books.....		7 50

Amount carried orward.....	\$	1,677 00
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<i>Amount brought forward</i>	\$	1,677 00
John Barnes, for printing.....		3 98
Lowell Daily Sun, for printing		3 75
Chas. E. Robinson, for printing		10 25
Sampson, Murdock & Co., for directory		2 00
<hr/>		
Total Expenditure for the year 1898.....	\$	1,696 98
Balance to General Treasury Fund.....		28 02
<hr/>		
	\$	1,725 00
<hr/>		

STATE AID, "WAR WITH SPAIN."

Appropriated from General Treasury		
Fund	\$ 5,200 00	
	<u> </u>	\$ 5,200 00

RECEIPTS.

From Appropriation for Incidentals, for blank books and burial of Chester Cummings...	\$ 50 75	
Sundry persons, cash returned to Treasury.....	16 00	
	<u> </u>	\$ 66 75
		<u> </u>
		\$ 5,266 75
		<u> </u>

EXPENDITURES.

Paid for SUNDRIES :

To Sundry persons, aid, as per pay rolls	\$ 1,832 00
Thompson & Hill, for printing.	2 50
M. G. Wight & Co., for blank books	28 25
	<u> </u>
<i>Amount carried forward.....</i>	\$ 1,862 75

Amount brought forward..... \$ 1,862 75

To C. M. Young & Co., for burial of
Chester Cummings..... 27 00

Total Expenditure for the year
1898..... 1,889 75
Balance to General Treasury
Fund 3,377 00

\$ 5,266 75

SUPPLY DEPARTMENT.

Annual Appropriation.....	\$	5,200 00		
Additional Appropriation.....		14 13		
		<u> </u>	\$	5,214 13
Received from Appropriation for Commons, for horse.....		125 00		
		<u> </u>		125 00
			\$	<u><u>5,339 13</u></u>

EXPENDITURES.

Paid PURCHASING AGENT:

To Virgil G. Barnard, salary.....	\$	2,400 00		
		<u> </u>	\$	2,400 00

Paid for SUNDRIES :

To Clinton R. Carpenter, clerk.....		638 61		
Eleanor M. Churchill, clerk.....		552 00		
Abram Fenton, clerk.....		636 00		
Lillian Searle, clerk.....		22 67		
Samuel A. McPhetres, clerk....		110 00		
Virgil G. Barnard, for office ex- penses.....		306 24		
Appropriation for streets, for re- pairing harness, board of horse, etc.....		162 20		
		<u> </u>		
<i>Amounts carried forward.....</i>	\$	2,427 72	\$	2,400 00

<i>Amounts brought forward.....</i>	\$	2,427 72	\$	2,400 00
To Ballard & Kirshbaum, for tele- phone index		1 00		
N. E. Tel. & Teleg. Co., for ser- vices		76 78		
W. U. Teleg. Co., for telegrams		1 74		
Automatic Time Stamp and Register Co., for ribbon...		50		
Courier-Citizen Co., for printing		30 35		
Dumas & Co., for order books.		33 15		
Hutchins Rubber Type Foundry for stamps.....		1 50		
George R. King & Co., for pens		1 11		
Lynn Platinum Pen Co., for pens.....		1 25		
Little, Brown & Co., for book..		2 50		
Library Bureau, for index cards and phamphlet cases.....		52 30		
Thomas H. Lawler, for sta- tionery.....		18 82		
Lawler & Co., for printing....		4 50		
A. E. Martel & Co, for dupli- cating books.....		12 00		
G. C. Prince & Son, for sta- tionery		8 45		
Sampson, Murdock & Co., for directory.....		2 00		
The Fairbanks Co., for paper scales		5 06		
Thompson & Hill, for printing.		10 00		
Tilton & Co., for stationery....		85		
Union Printing Co., for en- velopes and printing.....		8 28		
Vox Populi Press, for printing..		1 50		
Robert E. Wescott, for pictures		3 00		
M. G. Wight & Co, for sta- tionery		14 45		
Bartlett & Dow, for key.....		25		
J. T. Carter & Co., for table...		5 75		
C.I. W. Maynard & Co., for pins		70		
The Globe Co., for cabinet.....		21 40		
Tucke & Parker, for shades....		65		
George H. Wood, for clock....		6 00		
A. H. Cluer, for whip and car- riage boot.....		3 75		
Fay Bros. & Hosford, for sleigh and robe.....		55 00		
<i>Amounts carried forward.....</i>	\$	2,812 31	\$	2,400 00

<i>Amounts brought forward</i>	\$	2,812 31	\$	2,400 00
To Lowell Rubber Co., for horse cover		4 00		
E. P. McCoy, for repairing wagon		10 00		
Sawyer Carriage Co., for repair- ing carriage.....		50 38		
American Express Co., for transportation.....		5 20		
Man. & Con., N. H., Ex. Co., for transportation....		95		
B. & M. R. R. Tickets, for trip tickets		40 50		
		<hr/>	\$	<hr/> 2,923 34
Total Expenditure for the year 1898			\$	5,323 34

1897 BILLS.

Paid for SUNDRIES :

To Thomas H. Lawler, for station- ery.....	\$	1 10		
G. C. Prince & Son, for subscrip- tion		5 75		
N. E. Tel. & Teleg. Co., for ser- vice		7 28		
		<hr/>	\$	<hr/> 14 13
				5,337 47
Balance to General Treasury Fund				1 66
			\$	<hr/> 5,339 13

WATERING STREETS.

Annual Appropriation.....	\$	9,000 00		
		9,000 00	\$	9,000 00

RECEIPTS.

From Appropriation for Streets, for teaming	\$	764 00		
Appropriation for Sewers, for teaming		31 50		
Fred Cronin, for overdraft...		19 72		
		815 22	\$	815 22
			\$	9,815 22

EXPENDITURES.

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	\$	128 00		
Appropriation for streets, for services of superintendent.		250 00		
Appropriation for streets, for repairing harnesses and carts, etc.....		660 66		
		1,038 66		
<i>Amount carried forward.....</i>	<i>\$</i>	<i>1,038 66</i>		

Amount brought forward \$1,038 66

To Appropriation for Water	
Works, for water	756 00
Sundry persons, for labor	5,262 40
Boutwell Bros., for iron	9 82
Bartlett & Dow, for hardware	1 25
H. R. Barker Mfg. Co., for pipe, fittings and labor	32 20
J. L. & H. K. Potter, for parts and valves for sprinklers	40 75
Robert B. Seeton, for repairing cart	8 00
Ame & Co., for standard food	90 00
Blake & Wood, for hay	361 69
Philip H. Connell, for hay	77 62
Charles Dumas, for oats	70 66
G. M. Foster, for hay	135 42
C. H. Hanson & Co., for hay	131 61
B. W. Johnson, for hay	314 04
F. J. Knight, for hay	206 53
Wm. E. Livingston, for oats	690 15
James Meek, for oats	378 03
Sylvester Bean, for white lead	1 50
H. F. Ebert, for cards, combs and brushes	29 20
John J. Farrell, for horse powder	5 00
Smith & Goold, for lotion	6 30
M. G. Wright & Co., for blank books	9 45
C. H. Hanson & Co., for use of horse	17 50
Man. & Con. N. H. Ex. Co, for transportation	90
Isabella I. Lyman, for abate- ment of assessment	2 00
Lowell Electric Light Corp., for lights	57 22

Total Expenditure for the year 1898	\$	9,733 90
Balance to General Treasury Fund		81 32
	\$	<u>9,815 22</u>

WATER WORKS.

Balance undrawn Jan. 1, 1898.....	\$ 33,384 45	
	<hr/>	\$ 33,384 45
Received from Sundry persons, for service pipe, meters, water etc.	\$ 194,291 30	
	<hr/>	194,291 30
		<hr/>
		\$ 227,675 75
		<hr/>

EXPENDITURES.

Paid for SERVICES :

To Frank L. Weaver, President...	\$ 400 00	
Robert J. Thomas, Superin-		
tendent.....	1,800 00	
	<hr/>	\$ 2,200 00
Paid sundry persons, for labor	\$ 59,029 25	
	<hr/>	59,029 25
Paid Appropriation for City		
Debt, installments on notes	\$ 30,100 00	
	<hr/>	30,100 00

Paid INTEREST :

To Commonwealth of Massachu-		
setts.....	\$ 2,600 00	
Lowell Institution for Savings.	5,705 00	
Sundry persons.....	42,080 00	
	<hr/>	50,385 00
		<hr/>
<i>Amount carried forward.....</i>	\$	141,714 25

Amount brought forward..... \$ 141,714 25

Paid sundry persons, refunds on
water rates..... \$ 1,770 16

1,770 16

Paid for FUEL :

To Daniel Gage..... \$ 4,423 24
Wm. E. Livingston..... 15,100 20
Alfred Leblanc..... 34 00
John G. Gordon, for weighing
coal 36 00

19,593 44

**Paid for PIPE, METERS, HY-
DRANTS, etc :**

To Charles E. Adams..... \$ 286 35
W. T. S. Bartlett..... 183 10
H. R. Barker Mfg. Co..... 48 64
Builders Iron Foundry..... 499 02
Chapman Valve Manufacturing
Co..... 3 67
Coffin Valve Co..... 170 72
T. Costello & Co..... 748 44
Deane Steam Pump Co..... 282 25
Drury & Green..... 294 06
Edson Manufacturing Co..... 59
Fox & Engel..... 1,761 01
Fred M. Gow..... 110 00
Wm. H. Hope & Co..... 4 02
Hersey Manufacturing Co..... 170 70
S. P. Jones..... 10 00
Lawrence Machine Co..... 142 30
Ludlow Valve Co..... 1,431 30
Lead Lined Iron Pipe Co..... 1,007 95
Benjamin Lawrence..... 18 79
Lowell Steam Boiler Woks.... 12 61
Thomas Mather..... 63 50
Metropolitan Meter Co..... 18 00
McNeil Pipe and Foundry Co.. 685 60
Middlesex Machine Co..... 5 42
Michigan Brass and Iron Works 7 80
National Meter Co..... 4,066 40
Neptune Meter Co..... 294 00
Perry Seamans & Co..... 10 95
Prop.'s Locks & Canals..... 1 01
Renssalaer Manufacturing Co. 29 50
Charles L. Randall..... 4 00

Amounts carried forward..... \$ 12,371 70 \$ 163,077 85

<i>Amounts brought forward.....</i>	\$ 12,371 70	\$ 163,077 85
To A. P. Smith Manufacturing Co	468 50	
Sherrerd & French Co.....	104 00	
Staples Bros.....	612 10	
Scannell & Wholey.....	9 11	
Thompson Meter Co.....	323 30	
The Fairbanks Co.....	6 50	
Union Water Meter Co.....	534 65	
R. D. Wood & Co.....	20 00	
Henry R. Worthington.....	588 59	
Walworth Manufacturing Co..	3 60	
Warren Foundry and Machin- ery Co.....	712 83	
H. H. Wilder & Co.....	263 75	
Thomas Watkins.....	15 30	
	<hr/>	16,033 93

Paid for SUNDRIES :

To Appropriation for Engineering, for engineering.....	1,168 13
Appropriations for Public Build- ings, for labor and material	141 78
Lowell Gas Light Co., for gas..	158 40
Lowell Electric Light Corp., for lights	399 00
N. E. Tel. & Teleg. Co., for service.....	542 58
W. U. Teleg. Co., for telegrams	85
Otis Allen & Son, for lumber..	4 00
Burnham & Davis, for lumber.	71 02
Davis and Sargent, for lumber.	29 58
Howe Lumber Co., for lumber.	2 40
Charles E. Howe & Co. for lumber.....	511 29
Pratt & Forrest, for lumber....	16 91
William H. Wiggin, for lumber	292 79
Charles E. Adams, for hardware and glass.....	142 40
American Bolt Co., for bolts and iron	5 75
W. T. S. Bartlett, for hardware	1 16
Bartlett & Dow, for hardware	72 33
Boutwell Bros., for hardware..	71 33
H. B. Shattuck & Son, for hard- ware.....	21 43
Thompson Hardware Co., for hardware.....	41 78

<i>Amounts carried forward.....</i>	\$ 3,694 91	\$ 179,111 78
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<i>Amounts brought forward</i>	\$ 3,694 91	\$ 179,111 78
To John Callaghan, for dippers...	2 30	
W. W. Carey, for gear, pulley, shafting and labor	25 48	
F. W. Foster Manufacturing Co., for grate	72 00	
Kitson Machine Co., for labor	2 75	
Joel Knapp & Son, for sharpen- ing lawn mower	1 25	
Lowell & Suburban Street Rail- way Co., for moter, wires, and labor	55 44	
Lowell Steam Boiler Works, for grates and labor	63 19	
Charles F. Morse, for salamo- niac	30	
McPhee & Co., for composition.	4 42	
A. F. Nichols, for castings	4 95	
Pevey Bros., for castings	976 22	
Rhode Island Steeple & Chim- ney Co., for repairing and painting chimney	33 00	
Rice & Co., for wire cloth	30 03	
S. C. Smith, for screws and studs	2 75	
Union Brass Foundry, for com- position	1 35	
Washburn & Moen Manufactur- ing Co., for wire	135 55	
Henry F. Whiting, for belting.	19 95	
Bonne, Scymser & Co., for oil	67 51	
Sylvester Bean, for paint	3 43	
Walter Coburn & Co., for waste	34 25	
C. B. Coburn & Co, for oil, packing, hose, etc	565 52	
Crystal Oil Co., for oil	63 03	
F. O. Ducey & Co., for globes and chimneys	9 50	
Donovan & Co., for dualin	10 93	
Eagle Oil & Supply Co., for oil.	29 60	
Frank Garvey, for medicine...	6 00	
Josiah Gates & Sons, for leather and lacings	7 25	
C. H. Hanson, Jr., for soap	1 50	
George D. Jewett, for bags	4 50	
<i>Amounts carried forward</i>	\$ 5,928 86	\$ 179,111 78

Amounts brought forward. \$ 5,928 86 \$ 179,111 78

To Knowlton Packing Co., for packing	143 51
A. L. Kittredge & Co., for paint, putty, labor, etc.	11 48
Leighton Bros., for wicks	1 30
Leonard & Ellis, for oil	457 19
Wm. Nichols & Co., for matches, etc.	28 00
Alden Speares Sons & Co., for paint	27 28
Caleb L. Smith, for soap	4 45
Talbot Dyewood & Chemical Co., for thermometers	5 43
W. A. Wood & Co., for oil	21 50
Bates Manufacturing Co., for numbering machine	12 00
V. G. Barnard for stamps and envelopes	50 70
John Barnes, for printing	9 90
Courier-Citizen Co., for printing and advertising	16 40
Daily News Co., for advertising	7 00
Dumas & Co., for paper, blank books and printing	105 63
Engineering Record, for subscription	5 00
Engineering News, for subscription	5 00
Enterprise Printing & Stamp Works, for envelopes and paper	5 00
Fire and Water, for subscription	3 00
Hutchins Rubber Type Foundry	2 50
George F. King & Co., for pencils	3 60
Lowell Daily Sun, for advertising	7 38
Thomas H. Lawler, for stationery	18 50
Morning Mail Co., for advertising and printing	85 50
G. C. Prince & Son, for stationery	14 51

Amounts carried forward. \$ 6,980 62 \$ 179,111 78

Amounts brought forward..... \$ 6,980 62 \$ 179,111 78

To Charles E. Robinson, for printing	3 10
Sampson, Murdock & Co., for directories	6 00
Tilton & Co., for stationery ...	2 00
Thorpe & Bailey, for printing..	2 50
F. A. M. Tobin, for printing...	28 98
Union Printing Co., for printing	102 25
D. Van Nostrand Co., for Fullers' Report.	10 00
Water & Gas Review Publishing Co., for subscription...	1 00
M. G. Wight & Co., for blank books.....	78 50
James Burns, for slate, zinc and labor.....	47 91
P. Conlon, for mason work and material.....	920 15
Philip Ginty, for slating... ..	11 09
Lewis D. Gumb, for stone bounds.....	31 50
Wm. E. Livingston, for cement	181 75
P. O'Hearn, for mason work and teaming	210 66
E. A. & A. T. Smith, for concrete	95 99
E. A. Wilson, Agt., for brick, cement and teaming.....	144 57
E. A. Wilson & Co., for cement	40 99
Walsh & Co., for plastering...	4 00
Adams & Co., for linoleum ...	14 93
Patrick Brady, for cane-seating.	1 50
Willard A. Brown, for leather.	3 37
John Cross, for care of awnings	2 00
G. W. Dudley, for repairing clock	1 00
Josiah Gates & Sons, for leather	6 25
Lowell Rubber Co., for rubber supplies, repairing, etc.	30 74
Marshall & Crosby, for desk top	7 00
C. E. Mussey, for electric lights	8 00
O'Sullivan Bros., for rubber boots.....	42 00

Amounts carried forward..... \$ 9,020 35 \$ 179,111 78

<i>Amounts brought forward</i>	\$	9,020 35	\$	179,111 78
To O'Donnell & Gilbride Co., for portieres and poles.....		11 50		
Robertson & Co., for chimneys.		4 80		
Spencer & Co., for lettering books.....		1 50		
John W. Crawford, for ex- penses of board.....		41 00		
Robert J. Thomas, for expenses.		48 50		
B. & M. R. R. Tickets, for tickets		40 00		
James P. Donohoe & Co., for refreshments.....		2 70		
D. S. Leary, for refreshments..		7 00		
D. L. Page Co., for refresh- ments		14 45		
Richardson's Hotel, for refresh- ments		33 70		
H. C. Church & Son, for insur- ance		10 00		
Home Guaranty Insurance Co., for insurance.....		99 00		
Daniel E. Hogan, for chair de- stroyed by blasting on Mar- ginal Street.....		1 87		
L. J. McDonough, for medical aid to Thomas Roark		15 00		
Thomas Roark, for loss of time caused by injuries.....		94 00		
E. P. Bryant, for repairing wagon		12 35		
A. H. Cluer, for repairing har- nesses		66 65		
H. F. Ebert, for repairing har- nesses		2 45		
Cahill Bros., for shoeing horses		34 70		
Owen J. Carney, for shoeing horses		40 05		
Desmond & Barrett for shoeing horses		7 63		
Cornelius Desmond Agt, for shoeing horses.....		79 95		
Henry Reynolds, for shoeing horses		8 50		
C. H. Hanson, for oil, brush and curry comb.....		2 75		
<i>Amounts carried forward</i>	\$	9,700 40	\$	179,111 78

<i>Amounts brought forward</i>	\$	9,700 40	\$	179,111 78
To Sawyer Carriage Co., for repairing carriages.....		238 00		
Ame & Co., for standard food		11 25		
J. B. Covert & Co., for hay and straw		155 29		
Coffey Bros., for oats.....		301 10		
George D. Coburn, for mowing and hauling hay.....		10 00		
Nazaire Denault, for mowing and hauling hay.....		11 00		
George F. Fall, for raking and storing hay.....		6 50		
James Meek, for oats.....		134 54		
E. S. Sherman & Co., for straw		5 82		
John Trull, for hay.....		16 31		
Elizabeth B. Bodwell et. als., for land		4,853 15		
Ernest T. Genest, for land.....		157 82		
Props. Locks & Canals, for rent of land.....		290 00		
Charles F. Coburn, for recording deeds		2 65		
Town of Chelmsford, for taxes.		85 80		
J. N. Sparks, for carriage hire..		50 35		
Thomas F. Fay, for cleaning vaults		12 00		
B. G. Brown, for teaming.....		24 00		
Philip P. Conners & Co., for teaming.....		319 65		
E. Duren, for teaming.....		713 50		
Ed. Judge, for teaming.....		1 50		
G. E. Stanley, for teaming.....		227 00		
John A. Simpson, for teaming..		3 00		
American Express Co., for transportation		12 95		
B. & L. Des. Ex. Co., for transportation		95		
Manchester & Concord Express Co., for transportation.....		15		
N. Y. & B. Des. Ex. Co., for transportation.....		10 00		
B. & M. R. R., for transportation		60 97		
N. Y., N. H. & H. R. R. Co., for transportation.....		95 57		
Total Expenditure for the year 1898.....				17,511 22
			\$	196,623 00
<i>Amount carried forward</i>			\$	196,623 00

Amount brought forward..... \$ 196,623 00

1897 BILLS.

To Appropriation for Engineering, for engineering.....	\$ 16 25
American Express Co., for transportation.....	1 65
B. & M. R. R., for transportation.....	76 13
Bontwell Bros., for shoes.....	3 50
A. H. Cluer, for repairing harnesses.....	9 20
Crystal Oil Co., for oil.....	2 81
C. B. Coburn & Co., for hose, packing and line.....	28 05
Courier-Citizen Co., for advertising.....	4 50
Owen J. Carney, for shoeing horses.....	8 50
Cahill Bros., for shoeing.....	3 00
Conners Bros., for teaming. . .	4 00
Deane Steam Pump Co., for valves and springs.....	84 00
Desmond & Barrett, for shoeing.....	6 88
Daniel Gage, for coal.....	159 77
W. F. Head & Son, for brick.	220 50
Lowell Electric Light Corp., for lights.....	9 80
Lowell Gas Light Co., for gas..	4 70
Wm. E. Livingston, for cement.	52 50
Manchester & Concord N. H. Express Co., for transportation.....	45
McPhee & Co., for composition.	41 79
J. Merrill & Son, for diary.....	80
N. E. Tel. & Teleg. Co., for services.....	45 01
N. Y. & B. Des. Ex. Co., for transportation....	2 90
G. C. Prince & Son, for stationery.....	40
J. H. Swett, for repairing carriage.....	20 20
Tucke & Parker, for repairing battery.....	2 25

Amounts carried forward..... \$ 809 54 \$ 196,623 00

<i>Amounts brought forward</i>	\$	809 54	\$	196,623 00
To Union Brass Foundry, for couplings.....		4 86		
Walsh & Co., for labor and material.....		31 60		
		<hr/>		846 00
				<hr/>
				197,469 00
Balance undrawn \ Dec. 31, 1898.....				30,206 75
				<hr/>
				<hr/>
			\$	227,675 75

CORPORATION TAX.

Overdrawn.....	\$	26 56	
		<u> </u>	\$ <u>26 56</u>
Paid Commonwealth on account of tax of 1897.....	\$	26 56	
		<u> </u>	\$ <u>26 56</u>

NATIONAL BANK TAX.

Assessed on stocks in National Banks, owned by non-residents in 1898.....	\$	17,161 06	
Overdrawn		174 80	
		<hr/>	\$ 17,335 86

EXPENDITURES.

Paid Commonwealth on account of tax of 1897.....	\$	126 12	
Commonwealth on account of tax of 1898		17,209 74	
		<hr/>	\$ 17,335 86

STATE TAX.

Annual Appropriation.....	\$	44,634 29	
		<u> </u>	\$ 44,634 29

EXPENDITURES.

Paid Commonwealth, State Tax of			
1898 (ordinary.....)	\$	39,720 00	
Commonwealth, on account			
of Armory Loan.....		1,764 29	
Commonwealth, interest on			
Armory Loan.....		3,150 00	
		<u> </u>	\$ 44,634 29

COUNTY TAX.

Annual Appropriation.....	\$	65,861 96	
		<u> </u>	\$ 65,861 96
Paid County of Middlesex Tax of			
1898.....	\$	65,851 96	
		<u> </u>	\$ 65,861 96

TAXES.

The amount of taxes assessed on the Polls and on the Real and Personal Estates within the City of Lowell, for the year 1898, was as follows:

VALUATION OF AND TAX ON REAL AND PERSONAL PROPERTY,

VALUATION.	RATE.	TAX.
Personal Property \$15,350,323 00	\$18 00 per \$1,000	276,305 81
Real Estate..... 55,626,980 00	\$18 00 per \$1,000	1,001,285 64
Total Valuation.. \$70,977,303 00	Tax on Property.	\$ 1,277,591 45

Number of Polls, 24,526 @ \$2.00 each.....	\$49,052 00
	\$1,326,643 45

Tax assessed on shares of stock in the National Banks of Lowell, held by non-residents, and which are not included in the City Valuation.....	\$ 17,161 06	
	\$ 17,161 06	
		\$ 1,343,804 51

APPROPRIATED AND ASSESSED IN 1898.

For City Appropriations	\$ 1,187,654 95
State Tax.....	44,634 29
County Tax.....	65,861 96
National Bank Tax (non-resi- dents).....	17,161 06
Overlays	28,492 25
	<hr/>
	\$ 1,343,804 51
	<hr/>

TAXES.

	Due Jan. 1, 1898 and assessment.	Abated in 1898.	Collected in 1898.	Due Dec. 31, 1898.
Taxes of 1889..	\$ 18,519 76			\$18,519 76
Taxes of 1893..	15,597 60	\$13,971 00		1,626 60
Taxes of 1894..	13,638 80		\$ 2 00	13,636 80
Taxes of 1895..	17,798 99	2 00	3,858 00	13,938 99
Taxes of 1896..	85,924 73	408 38	61,567 74	23,948 61
Taxes of 1897..	242,238 60	1,221 45	125,402 52	115,614 63
Taxes of 1898..	1,343,804 51	4,141 74	1,069 628 49	270,034 28
	<hr/>	<hr/>	<hr/>	<hr/>
	\$1,737,522 99	\$19,744 57	\$1,260,458 75	\$457,319 67

TEMPORARY LOANS.

Balance undrawn Jan. 1, 1898.....	\$	250,000 00
Appropriation from General Treasury Fund.....		1,250,000 00
		\$ 1,500,000 00

EXPENDITURES.

Paid	Central Savings Bank.....	\$	25,000 00
	Edgerly & Crocker.....		100,000 00
	W. O. Gay & Co.....		50,000 00
	Lowell Institution for Savings		200,000 00
	F. S. Mosely & Co.....		350,000 00
	National Bank of Redemption		350,000 00
			\$ 1,075,000 00
	Amount carried forward.....		425,000 00
			\$ 1,500,000 00

SINKING FUNDS.

CITY HALL AND MEMORIAL BUILDING SINKING FUND.

Appropriation in 1898.....	\$ 7,500 00	
	<u> </u>	<u>7,500 00</u>
Paid Commissioners of Sinking Funds.....	\$ 7,500 00	
	<u> </u>	<u>7,500 00</u>

HIGH SCHOOL SINKING FUND.

Appropriated in 1898.....	\$ 3,000 00	
	<u> </u>	<u>3,000 00</u>
Paid Commissioners of Sinking Funds.....	3,000 00	
	<u> </u>	<u>3,000 00</u>

EXTENSION ROGERS FORT HILL PARK SINKING FUND.

Appropriated in 1898.....	\$ 6,000 00	
	<u> </u>	<u>6,000 00</u>
Paid Commissioners of Sinking Funds.....	\$ 6,000 00	
	<u> </u>	<u>6,000 00</u>

INTERCEPTING SEWER FUND.

Appropriated in 1898.....	\$ 5,000 00	
	<u> </u>	<u>5,000 00</u>

Paid Commissioners of Sinking Funds.....	\$ 5,000 00	
	<u> </u>	<u>5,000 00</u>

WATER LOAN SINKING FUND.

Appropriated in 1898.....	\$ 16,000 00	
	<u> </u>	<u>16,000 00</u>
Paid Commissioners of Sinking Funds.....	\$ 16,000 00	
	<u> </u>	<u>16,000 00</u>

SINKING FUND FOR HIGH SERVICE WATER SUPPLY.

Appropriated in 1898.....	\$ 1,800 00	
	<u> </u>	<u>1,800 00</u>
Paid Commissioners of Sinking Funds.....	\$ 1,800 00	
	<u> </u>	<u>1,800 00</u>

SINKING FUNDS FOR NEW SCHOOL HOUSES.

Appropriated in 1898.....	\$ 4,000 00	
	<u> </u>	<u>4,000 00</u>
Paid Commissioners of Sinking Funds.....	\$ 4,000 00	
	<u> </u>	<u>4,000 00</u>

SINKING FUNDS.

The values of the several Sinking Funds Dec. 31, 1898, which apply to the reduction of the water debt, as reported by the Commissioners of Sinking Funds, are as follows:

Water Loan Sinking Fund.....	\$	205,729	40	
Sinking Fund for High Service Water Supply.....		41,187	05	
				<hr style="width: 10%; margin-left: 0;"/>
	\$	246,916	45	

The values of the several Sinking Funds Dec. 31, 1898, which apply to the reduction of the Ordinary City Debt, as reported by the Commissioners of Sinking Funds, are as follows:

Intercepting Sewer Fund.....	\$	102,685	68	
City Hall and Memorial Building Sinking Fund.....		91,860	29	
High School Sinking Fund.....		26,987	67	
Extension Rogers Fort Hill Park Sinking Fund.....		30,591	77	
				<hr style="width: 10%; margin-left: 0;"/>
<i>Amounts carried forward</i>	\$	252,125	41	\$ 246,916 45

<i>Amounts brought forward</i>	\$ 252,125 41	\$ 246,916 45
Sinking Fund for New School Houses	7,828 40	
	<hr/>	\$ 259,953 81
Total value of Sinking Funds, Dec. 31, 1898.		<u>506,870 26</u>
The value of the Hapgood Wright Centennial Trust Fund Dec. 31, 1898, was.		<u>\$ 2,595 25</u>

DUE FROM THE CITY ON WATER LOAN.

DECEMBER 31, 1898.

Date of Securities.	To Whom Payable.	Amount.	Rate.	Interest—When Due.	Interest Due in 1898.	Notes and Installments, When Due.	Payments 1898.
1881, Nov. 1...	Blake Bros. & Co.....	\$ 75,000 00	4	May 1 and Nov. 1.	\$ 3,000 00	1911, Nov. 1.	
1890, Nov. 1...	Sundry persons (bonds).....	1,000,000 00	4	May 1 and Nov. 1.	40,000 00	1920, Nov. 1.	
*1890, Mar. 9...	Lowell Institution for Savings.....	18,000 00	4	March 9 and Sept. 9.	600 00	1899, Mar. 9.	\$ 6,000
†1892, Dec. 1...	Lowell Institution for Savings.....	40,000 00	4	June 1 and Dec. 1.	1,600 00	1899, Dec. 1.	10,000
†1894, Aug. 6...	Lowell Institution for Savings.....	30,000 00	3½	Feb. 6 and Aug. 6.	1,050 00	1899, Aug. 6.	5,000
†1895, Aug. 7...	Sundry persons.....	60,000 00	4	Feb. 7 and Aug. 7.	2,400 00	1899, Aug. 7.	5,000
†1897, Nov. 8...	Lowell Institution for Savings.....	36,900 00	4	May 8 and Nov. 8.	1,476 00	1899, Nov. 8.	4,100
		\$ 1,259,900 00			\$ 50,126 00		†\$30,100

*New Pumping Engine.

†Paid by Water Works.

‡Driven Well Plant.

DUE FROM THE CITY ON ORDINARY CITY DEBT.

DECEMBER 31, 1898.

Date of Securities.	To Whom Payable.	Amount.	Rate.	Interest—When Due.	Interest Due in 1899.	Notes and Installments. When Due.	Payments.
*1871, Mar. 6...	Bequest of Thomas Nesmith.....	\$ 25,000 00	6	March 6 and Sept. 6.	\$ 1,500 00	Perpetual.	
†1871, April 10...	Bequest of Thomas Nesmith.....	1,000 00	6	April 10 and Oct. 10.	60 00	Perpetual.	
†1878, May 10...	Bequest of Jonathan Tyler	10,000 00	6	May 10 and Nov. 10.	600 00	Perpetual.	
1882, Oct. 2	Sundry persons (bonds).....	56,000 00	4	April 2 and Oct. 2.	2,240 00	1902, Oct. 2.	
1883, April 2....	Perkins, Dupee & Co. (bonds).....	94,000 00	4	April 2 and Oct. 2.	3,760 00	1903, April 2.	
1889, March 4...	Lowell Institution for Savings.....	4,000 00	4	March 4.	80 00	1899, Mar. 4.	\$ 4,000 00
1889, May 22...	Lowell Institution for Savings.....	2,500 00	3½	May 22.	45 31	1899, May 22.	2,500 00
1889, June 3...	Lowell Institution for Savings.....	3,000 00	3½	June 3.	54 38	1899, June 3.	3,000 00
1889, Dec. 1...	Blake Bros. & Co. (bonds).....	22,000 00	4	June 1 and Dec. 1.	880 00	1899, Dec. 1.	22,000 00
1890, July 16...	Lowell Institution for Savings.....	7,000 00	4	Jan. 16 and July 16.	280 00	1899, July 16.	3,500 00
1890, Oct. 1	Sundry persons (bonds).....	450,000 00	4	April 1 and Oct. 1.	18,000 00	1920, Oct. 1.	
1890, Nov. 29...	Lowell Institution for Savings.....	9,200 00	4	May 29 and Nov. 29.	368 00	1899, Nov. 29.	4,600 00
1891, April 1...	Sundry persons (bonds).....	130,000 00	4	April 1 and Oct. 1.	6,000 00	1921, April 1.	
1891, May 16...	Lowell Institution for Savings.....	30,000 00	4	May 16 and Nov. 16.	1,000 00	1899, May 16.	10,000 00
1891, July 6....	Lowell Institution for Savings.....	18,000 00	4	Jan. 6 and July 6.	720 00	1899, July 6.	6,000 00
1891, Oct. 19...	Lowell Institution for Savings.....	14,100 00	4	March 14 and Sept. 14.	564 00	1899, Sept. 14.	4,700 00
1891, Nov. 28...	Central Savings Bank.....	5,700 00	4	April 19 and Oct. 19.	278 00	1899, Oct. 19.	1,900 00
1892, April 9...	Lowell Institution for Savings.....	16,500 00	4	May 28 and Nov. 28.	660 00	1899, Nov. 28.	5,500 00
1892, May 4....	Central Savings Bank	20,000 00	4	April 9 and Oct. 9.	700 00	1899, April 9.	5,000 00
1892, June 3...	Lowell Institution for Savings.....	28,000 00	4	May 4 and Nov. 4.	980 00	1899, May 4.	7,000 00
1892, June 3...	Central Savings Bank	18,000 00	4	June 3 and Dec. 3.	630 00	1899, June 3.	4,500 00
1892, Aug. 31...	Lowell Institution for Savings.....	14,000 00	4	June 3 and Dec. 3.	490 00	1899, June 3.	3,500 00
1892, Nov. 1 ...	Lowell Institution for Savings.....	28,000 00	4	Feb. 28 and Aug. 31.	1,120 00	1899, Aug. 31.	7,000 00
1893, June 7....	Lowell Institution for Savings.....	40,000 00	4	May 1 and Nov. 1.	1,600 00	1899, Nov. 1.	10,000 00
1893, June 17...	Lowell Institution for Savings.....	19,350 00	4	June 7 and Dec. 7.	718 20	1899, June 7.	3,990 00
1893, Nov. 1....	Lee, Higginson & Co.	29,000 00	4	June 17 and Dec. 17.	1,044 00	1899, June 17.	5,800 00
1893, Dec. 3....	Lowell Institution for Savings.....	77,500 00	4½	May 1 and Nov. 1.	3,293 75	1899, Nov. 1.	15,500 00
1894, Feb. 19...	Sundry persons (bonds).....	61,000 00	4	June 3 and Dec. 3.	2,440 00	1899, Dec. 3.	12,200 00
1894, Feb. 21...	Central Savings Bank	70,210 29	3½	Feb. 19 and Aug. 19.	2,457 36	1904, Feb. 19.	
1894, Feb. 21...	Lowell Institution for Savings.....	15,600 00	4	Feb. 21 and Aug. 21.	572 00	1899, Feb. 21.	2,600 00
1894, April 1...	Lowell Institution for Savings.....	36,000 00	3½	Feb. 21 and Aug. 21.	1,278 75	1899, Feb. 21.	6,000 00
1894, May 4....	Lowell Institution for Savings.....	9,000 00	4	April 1 and Oct. 1.	330 00	1899, April 1.	1,500 00
1894, June 29...	Lowell Institution for Savings.....	30,000 00	3½	May 4 and Nov. 4.	962 50	1899, May 4.	5,000 00
1894, July 12...	Lowell Institution for Savings.....	30,600 00	3½	June 29 and Dec. 29.	981 75	1899, June 29.	5,100 00
1894, Oct. 19...	Lowell Institution for Savings.....	15,000 00	3½	Jan. 12 and July 12.	525 00	1899, July 12.	2,500 00
1894, Oct. 19...	Lowell Institution for Savings.....	4,200 00	3½	April 19 and Oct. 19.	147 00	1899, Oct. 19.	700 00
1895, Jan. 4....	Lowell Institution for Savings.....	60,000 00	3½	April 19 and Oct. 19.	2,100 00	1899, Oct. 19.	10,000 00
1895, Jan. 4....	National Bank of Redemption, Boston....	8,400 00	4	Jan. 4 and July 4.	312 00	1899, Jan. 4.	1,200 00
1895, Aug. 7....	Sundry persons	52,500 00	4	Jan. 4 and July 4.	1,950 00	1899, Jan. 4.	7,500 00
1895, Nov. 27...	Seamen's Bank for Savings, N. Y.	70,000 00	4	Feb. 7. and Aug. 7.	2,800 00	1899, Aug. 7.	10,000 00
1896, May 5....	Lowell Institution for Savings.....	60,000 00	3½	May 27 and Nov. 27.	2,800 00	1899, Nov. 27.	10,000 00
1896, May 6....	E. H. Rollins & Son....	20,000 00	4	May 5 and Nov. 5.	2,039 06	1899, May 5.	7,500 00
1896, May 6....	E. H. Rollins & Son	20,000 00	4	May 6 and Nov. 6.	750 00	1899, May 6.	2,500 00
1896, July 1....	Sundry persons (bonds).....	20,000 00	4	May 6 and Nov. 6.	750 00	1899, May 6.	2,500 00
1896, Sept. 19...	New England Life Insurance Co., Boston..	200,000 00	4	Jan. 1 and July 1.	8,000 00	1926, July 1.	1,900 00
1896, Nov. 18...	E. H. Rollins & Son	15,200 00	4	March 19 and Sept. 19.	608 00	1899, Sept. 19.	5,000 00
1897, May 11...	The Seamen's Bank for Savings, N. Y.....	40,000 00	4	May 18 and Nov. 18.	1,600 00	1899, Nov. 18.	7,500 00
1897, Aug. 10...	Lowell Institution for Savings.....	67,500 00	4	May 11 and Nov. 11.	2,550 00	1899, May 11.	4,500 00
1897, Nov. 8....	Lowell Institution for Savings.....	40,500 00	4	Feb. 10 and Aug. 10.	1,620 00	1899, Aug. 10.	1,500 00
1897, Nov. 28...	Lowell Institution for Savings.....	13,500 00	4	May 8 and Nov. 8.	540 00	1899, Nov. 8.	1,010 00
1898, May 18...	Lowell Institution for Savings.....	9,090 00	4	May 24 and Nov. 24.	363 60	1899, Nov. 24.	10,000 00
1898, July 9....	City Institution for Savings.....	10,000 00	4	May 18 and Nov. 18.	3,800 00	1899, May 18.	3,500 00
1898, Aug. 6....	Commissioners of Sinking Funds,	35,000 00	4	Jan. 9 and July 9.	1,400 00	1899, July 9.	2,500 00
1898, Aug. 15...	Lowell Five Cent Savings Bank.....	25,000 00	3½	Feb. 6 and Aug. 6.	875 00	1899, Aug. 6.	520 00
1898, Sept. 22...	Lowell Five Cent Savings Bank.....	5,200 00	4	Feb. 15 and Aug. 15.	208 00	1899, Aug. 15.	3,000 00
1898, Oct. 4	City Institution for Savings.....	30,000 00	4	March 22 and Sept. 22.	1,200 00	1899, Sept. 22.	3,600 00
1898, Nov. 9....	Lowell Institution for Savings.....	36,000 00	4	April 4 and Oct. 4.	1,440 00	1899, Oct. 4.	10,000 00
1898, Dec. 8....	Lowell Institution for Savings.....	100,000 00	4	May 9 and Nov. 9.	4,000 00	1899, Nov. 9.	4,800 00
1898, Dec. 8....	Lowell Institution for Savings.....	48,000 00	4	June 8 and Dec. 8.	1,920 00	1899, Dec. 8.	3,010 00
1898, Dec. 8....	Lowell Institution for Savings.....	30,100 00	4	June 8 and Dec. 8.	1,204 00	1899, Dec. 8.	
Amount of City Debt (ordinary)		\$2,620,650 29		Int. Ordinary City Debt	\$102,139 66	Installments, Ord. City Debt	\$279,130 00
Amount of Water Loan		1,259,900 00		Int. Water Loans.	50,126 00	Installments, Water Debt.	30,100 00
Total Amount of City Debt		\$3,879,550 29		Total Int. City Debt.	\$152,265 66	Total Instal'ts. City Debt.	\$309,230 00
Amount of Sinking Funds.....		506,870 26					
Net City Debt.....		\$3,373,680 03					

* Interest on the same for the poor.

† Interest on the same for High Street Church.

‡ Interest on the same for the poor.

GENERAL TREASURY FUND—TAXES.

Uncollected Taxes Jan. 1, 1898....	\$ 393,718 48	
Tax Levy.....	1,343,804 51	
	<hr/>	\$ 1,737,522 99
		<hr/>
Received on account of taxes during the year 1898.....	\$ 1,260,458 75	
Abated by Assessors.....	19,744 57	
	<hr/>	1,280,203 32
Uncollected Taxes Dec. 31, 1898...		457,319 67
		<hr/>
		\$ 1,737,522 99
		<hr/>

GENERAL TREASURY FUND—LOANS.

Received from sundry persons on account of Permanent Loans.....	\$ 409,300 00	
Received from sundry persons, on account of Temporary Loans...	1,250,000 00	
	<hr style="width: 100%;"/>	\$ 1,659,300 00
		<hr style="width: 100%;"/>

Appropriated for Ordinary expenses in Annual Appropriation Resolution.....	\$ 125,000 00	
Sewer Construction.	105,000 00	
Widening Andover Street.....	35,000 00	
Extension of Aiken Street to Merimack Street.....	30,100 00	
Extension of Lundberg Street.....	25,000 00	
Rebuilding Huntington Hall.....	36,000 00	
State Aid, "War With Spain,".....	5,200 00	
Assessors.....	750 00	
Care City Hall.....	400 00	
Health.....	7,300 00	
Interest.....	1,341 89	
Heating City Hall and Memorial Building.....	500 00	
Lighting.	1,500 00	
Paupers, Out Door Relief.	11,000 00	
School Houses.....	8,000 00	
Streets.....	7,500 00	
General Fund, Ordinary.....	9,708 11	
Temporary Loans.....	1,250 000 00	
	<hr style="width: 100%;"/>	\$ 1,659,300 00
		<hr style="width: 100%;"/>

GENERAL TREASURY FUND (Ordinary).

Balance unappropriated Jan. 1, 1898	\$	32,559 45		
			\$	32,559 45

Received into the General Treasury
Fund, on account of the follow-
ing Appropriations or accounts:

From	City Cemeteries.....	7,444 83
	City Clerk.....	1,549 68
	City Sealer.....	443 36
	City Treasurer.....	2,228 48
	City Weigher and Measurer.	283 64
	Commons	570 96
	Engineering	12 25
	Fire	468 52
	Grade Crossings.....	28,081 75
	Health	3,229 02
	Huntington Hall.....	210 77
	Incidentals	61 97
	Interest	25,734 02
	Inspector of milk and vinegar	144 50
	Law	51 28
	Library.....	3,990 63
	Liquor Licenses.....	155,907 25
	Mayor	86
	Military Aid.....	3,573 50
	Paupers, Almshouse.....	2,569 32
	Paupers, Out Door Relief....	5,442 29
	Police	8,318 73
	Public Buildings.....	27 00

<i>Amounts carried forward.....</i>	\$	250,344 61		\$ 32,559 45
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<i>Amounts brought forward</i>	\$ 250,344 61	\$ 32,559 45
Schools.....	1,989 40	
School Houses.....	2 00	
Sewers.....	16,565 09	
Soldiers Relief.....	848 00	
State Aid.....	14,857 50	
Streets.....	9,264 92	
Corporation Tax.....	68,201 05	
National Bank Tax.....	4,548 87	
Armory Rent.....	1,300 00	
Watering streets.....	10,194 04	
	<hr/>	\$ 378,115 48

TRANSFERS.

From Appropriation for paving Chelmsford street.....	\$ 2,998 93	
Appropriation for addition to Varnum school house.	2,200 00	
Appropriation for Inciden- tals.....	1,000 00	
	<hr/>	6,198 93
Balances from Sundry De- partments, Dec. 31, 1898		35,981 18
		<hr/>
		\$ 452,855 04
		<hr/>
Appropriated for bills of 1897.....	\$ 22,555 74	
Appropriated for department expenses of 1898.....	376,727 80	
	<hr/>	399,283 54
Balance unappropriated Dec. 31. 1898.....		53,571 50
		<hr/>
		\$ 452,855 04

MEMORANDUM OF RECEIPTS ON ACCOUNT OF SEWER ASSESSMENTS.

B. STREET.

From A. Bottomley.....	\$	14 24
A. Goggin.....		28 49
Annie A. Ilsley.....		9 02
L. J. Marchand.....		28 49

BELLEVUE STREET.

E. T. Haskell.....	15 56
Walter H. Hoyt.....	53 20

BLOSSOM STREET.

George Halstead.....	10 05
B. M. Fadden.....	10 05
Olof Olson.....	10 05
A. E. Osgood.....	12 54
A. E. Osgood.....	10 61
A. E. Osgood.....	12 54
A. E. Osgood.....	12 54
A. E. Osgood.....	12 54
A. E. Osgood.....	11 31
K. J. Ward.....	10 05

Amount carried forward..... \$ 261 28

Amount brought forward..... \$ 261 28

BOYNTON STREET.

Wm. A. Delong.....	32 11
N. Peabody.....	100 06

BROADWAY.

D. Lovejoy & Son.....	74 75
Thomas J. McDonald.....	84 40

BURGESS STREET.

Wm. D. Large.....	14 10
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CAMPAW STREET.

L. Beauregard.....	22 48
N. Desmarais.....	14 68
Joseph Desrosiers.....	10 76
Est. D. G. Skillings.....	13 58
August Fels.....	11 97
A. Jodoin.....	14 68
Noe Patnaude.....	10 76
John M. Tucker.....	10 76

CARTER STREET.

A. E. Blanchard.....	111 29
James E. Burns.....	89 71
Lowell Bleachery... ..	18 91

CHAMBERS AND GORHAM STREETS.

Heirs F. T. Davis.....	151 49
Thomas Leland.....	94 36

Amount carried forward..... \$ 1,142 13

Amount brought forward..... \$ 1,142 13

CHELMSFORD STREET.

Mrs. G. F. Wright..... 85 74

CLARE STREET.

T. H. Reardon..... 24 29
T. H. Reardon..... 31 39
T. H. Reardon..... 32 80

CONGRESS STREET.

James Barris..... 80 27
J. H. McDermott..... 84 44
George Runels..... 15 85

COSGROVE STREET.

J. S. Haynes..... 24 69

CROWLEY STREET.

Wm. Kelley..... 44 97
John Lowney..... 51 21

D. STREET.

R. G. Bartlett..... 125 16
J. W. Bennett..... 118 94
J. W. Bennett..... 68 84
J. W. Bennett..... 62 58
Q. A. Foster..... 62 58
H. M. Keith..... 37 50

Amount carried forward..... \$ 2,093 38

Amount brought forward..... \$ 2,093 38

DURANT STREET.

E. F. Hathaway.....	15 74
Dennis O'Brien.....	75 00

EAST PAWTUCKET MAIN SEWER.

P. O'Hearn.....	440 72
Joseph J. Richards.....	68 75

ELM STREET.

J. L. Fay.....	60 50
Joseph Flynn.....	12 31

ELLSWORTH STREET.

Esther Carmichael.....	15 12
Rose A. Howard.....	15 12
Rose A. Howard.....	15 12
Patrick Keegan.....	13 22
E. M. McGlone.....	23 61
E. M. McGlone.....	12 81
A. E. Osgood.....	10 57
A. E. Osgood.....	11 14
A. E. Osgood.....	15 12
A. E. Osgood.....	15 12
A. E. Osgood.....	15 12
A. E. Osgood.....	13 22
A. E. Osgood.....	15 11
A. E. Osgood.....	30 61
A. E. Osgood.....	13 22

Amount carried forward..... \$ 3,000 63

Amount brought forward..... \$ 3,000 63

ENNELL STREET.

Henry Bonin.....	16 57
Heirs F. A. Hildreth.....	71 40
Heirs F. A. Hildreth.....	39 01
Lawrence Manufacturing Co.	266 50
J. G. LeBrun.....	16 57
Lowell Baptist Union.....	25 52
Merrimack Manufacturing Co	21 11
Alfred Pratt.....	8 52
Ralph Saulnier.....	4 02
D. Vincent	8 50
H. A. Wright.....	15 58

FIFTH AVENUE AND ROBERTS STREET.

John Barthilette.....	50 00
Mary J. Coffin.....	31 59
Joseph Desmarteau.....	31 68
John M. Dunfey.....	31 00
John M. Dunfey.	30 00
William H. Emery.....	180 00
Margaret Gretton.....	51 70
J. J. & G. H. Harrington ...	45 00
D. D. Jacobs.....	29 25
Vital Roberts.....	50 00
F. Samuels.....	29 25
Ellen E. Sears.....	30 00
Smith & Stafford.....	50 00

GARDNER AVENUE.

Joseph Gelinass.....	12 58
Joseph Gelinass.....	12 85
C. Lajoie	20 46
A. McKercher.....	10 74
A. McKercher.....	14 71

GERSHOM AVENUE.

H. Arvisais.....	12 61
V. Brodeur.....	26 01

Amount carried forward..... \$ 4,243 36

Amount brought forward \$ 4,243 36

GERSHOM AVENUE.—*Continued.*

Josephine Charette.....	45 51
H. Cinqmars.....	48 46
Ledger Genest.....	47 47
Michael E. Hamel.....	46 12
A. M. McKercher.....	29 26

HOVEY AND DALTON STREETS.

M. J. and Anna Healey.....	26 48
Simeon Lagasse.....	22 45
Calixte Le Quinn.....	20 05

LINCOLN AND BORDER STREETS.

Wm. Emerson.....	36 00
J. K. Foley.....	40 00
John C. Franck.....	100 00
Honora O'Connor.....	100 00
Patrick Rouine.....	40 00

LIVINGSTON STREET.

Lowell Bleachery.....	16 45
Lowell Bleachery.....	21 65
Lowell Bleachery.....	32 73
James McGuinness.....	16 31

LONDON STREET.

Wm. Emerson.....	14 08
Ellen Foley.....	20 12
Annie P. McHugh.....	17 54
Peter Pearson.....	13 41
James Rothwell.....	13 41
J. M. Scoble.....	14 08
Emily Wessels.....	13 41
E. Whittier.....	18 09

Amount carried forward..... \$ 5,056 44

Amount brought forward..... \$ 5,056 44

LUDLAM AND EIGHTEENTH STREETS.

Alex Gaudette..... 49 45

LUNDBERG STREET.

O. Fitzpatrick..... 71 59
C. G. Laurin..... 25 20
Henry S. Smith..... 17 65

MAIN STREET.

R. G. Bartlett..... 63 28

JUNE STREET.

H. W. Erdis..... 17 74

MAMMOTH ROAD.

Pawtucket Congregational
church.... 208 15

MIDLAND STREET.

Alice M. Burch..... 48 29
Mrs. N. M. Lang..... 96 88
Mrs. N. M. Lang..... 716 48
Mrs. N. M. Lang..... 213 48
Mrs. N. M. Lang..... 59 66
Mrs. M. F. Spalding..... 48 29
O. N. Thissell..... 75 36
Lizzie A. Walton..... 58 94

Amount carried forward..... \$ 6,826 88

Amount brought forward..... \$ 6,826 88

MOODY STREET.

Ellen J. Breen.....	53 12
Noe Champagne.....	60 16
A. E. Columbe.....	64 60
Margaret Condon.....	50 00
R. Descheneaux.....	53 12
William Dunn.....	74 97
John H. Farley.....	62 50
V. Gelinis.....	64 31
Ernest Genest.....	67 60
James F. Hurley.....	108 90
L. N. Milot.....	59 37
John Norton.....	53 12
E. Penault.....	56 25
Jennie Revere.....	62 50
C. W. Robinson.....	53 12
Albert J. Ryan.....	47 50
Albert J. Ryan.....	47 50

OAKLAND STREET.

C. E. Collins.....	19 61
Anna M. Dane.....	19 61
Florence E. Lewis.....	19 61
Jennie C. Smith.....	19 61

OLIVER STREET.

Kate A. Dineen.....	67 12
Est. H. C. Howe.....	95 17
C. T. Rowland.....	10 24
Heirs C. G. Sargent.....	92 70
Heirs C. G. Sargent.....	38 17
Heirs C. G. Sargent.....	56 11
L. M. Wright.....	68 55

Amount carried forward..... \$ 8,372 02

Amount brought forward.. . . . \$ 8,372 02

PAWTUCKETVILLE MAIN SEWER.

P. and C. Crowley.....	92 50
Heirs Isaac Holden.....	324 77
Proprietors Locks & Canals..	235 31
Proprietors Locks & Canals..	244 69
Proprietors Locks & Canals..	296 25
Proprietors Locks & Canals..	250 00

PERRY STREET.

Smith & Shedd.....	112 98
White Bros. & Co.....	128 87

PLAIN STREET AND QUIMBY AVENUE.

A. O. Coburn.....	57 48
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SARAH AND CHARLES AVENUE.

Heirs C. Bodwell.....	93 43
Heirs C. Bodwell.....	250 00
A. Belanger & Dixon.....	56 25
R. Fourangeau.....	62 50
R. Fourangeau.....	62 50
J. F. Milot.....	54 37

SARGENT STREET.

E. E. Brennan.....	28 73
Mrs. P. Cummings.....	26 42
C. W. Deehan.....	26 62
M. C. Hovey.....	28 52
Maria Lyons.....	43 68
William S. Nickles.	28 73
E. W. Wright.....	12 37

Amount carried forward..... \$ 10,888 99

Amount brought forward..... \$ 10,888 99

SIDNEY STREET.

E. A. Aitken.....	66 22
Walter Booth.....	65 00
Est. H. Craven.....	209 04
A. Fairbanks.....	65 36
John A. Helme.....	65 34
James Small.....	51 42
Henry Smith.....	55 18
Eli Turner.....	78 18

STATE STREET.

Timothy P. Donohoe.....	60 39
Timothy P. Donohoe.....	45 29
James Fallon.....	60 39
Margaret Haley.....	7 25
George Hardman.....	3 32
A. A. Williamson.....	45 29

SUTHERLAND STREET.

R. G. Bartlett.....	223 82
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TANNER STREET.

W. H. Whitman.....	17 87
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WANNALANCIT STREET.

Frederick Bailey.....	112 00
C. T. Rowland.....	72 40

WARWICK STREET.

James A. Brien.....	99 53
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Amount carried forward..... \$ 12,292 28

Amount brought forward \$ 12,292 28

WAUGH STREET.

Margaret Dougherty.....	123 57
Wm. Guiney.....	168 41
Frank Waugh.....	189 59
William Waugh.....	317 20

WESTFORD STREET.

Wm. H. Bent.....	55 10
Wm. H. Bent.....	83 33
Wm. H. Bent.....	68 08
Rolfe Bradbury.....	53 33
Elizabeth Ryan.....	75 63

WILDER STREET.

James Bradley... ..	50 00
George Carson.....	50 00
Est. Joseph Evans.....	400 00
John A. Taylor.....	41 42

WINDSOR STREET.

F. E. Bean.....	22 86
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WOODWARD AVENUE.

Thomas Hannafin.....	46 55	
	<hr/>	\$ 14,037 35

<i>Amount carried forward</i>		\$ 14,037 35
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Amount brought forward.....

\$ 14,037 35

Received for REMOTE DRAIN-
AGE :

From Merrimack Manufacturing		
Co., Andover Street....	\$	45 00
J. W. Ellis, Avon Street....		16 00
Daniel Powers, Broadway ..		22 39
Marietta Crevier, Branch		
Street.....		13 38
Proprietors of Locks &		
Canals, Cheever Street..		5 25
Charles W. Needham, Chelms-		
ford Street.....		25 36
H. C. Howe Est., Fletcher		
Street.....		26 56
Proprietors of Locks & Canals		
Ford Street.....		4 92
Proprietors of Locks & Canals		
Ford Street.....		4 92
Viola Wilson, Leverett Street		28 95
A. La Montague, Moody		
Street		20 00
Matilda T. Murphy, Moody		
Street.....		21 50
John A. Brown, Otis Street..		18 12
Allen Hallis, Otis Street....		17 77
E. B. Bodwell, Sarah Avenue.		50 00
T. Carson, Sarah Avenue....		25 00
A. Delisle, Sarah Avenue....		15 20
Arthur Genest, Sarah Avenue		34 80
Myron P. Ober, Thirteenth		
Street		3 75
C. L. Smith, Victoria Street..		5 00
A. M. Horr, Woodward		
Avenue.....		50 00
William Jones, Wilder Street		25 00
C. H. McIntire, Westford		
Street		25 00
Alice M. Price, Westford		
Street		23 87
	----- \$	527 74
		<u>\$ 14,565 09</u>

MEMORANDUM OF RECEIPTS ON ACCOUNT OF SIDEWALK ASSESSMENTS.

A STREET.

From William H. Hilliard..... \$ 18 96

AIKEN AVENUE.

Benjamin Benoit.....	17 50
D. W. Bugbee.....	32 00
Finley Chisholm.....	16 84
Heirs F. A. Hildreth.....	64 00
Heirs F. A. Hildreth.....	41 89
Heirs F. A. Hildreth.....	51 04
Heirs F. A. Hildreth.....	131 54
John Mahoney.....	16 00
Joseph A. Maille.....	20 80

AIKEN STREET.

F. M. Brogan.....	38 98
M. Duprez.....	18 21
S. Farrington.....	24 16
G. W. Harris.....	31 74
Lawrence Manufacturing Co..	198 74
Jules Lavelle.....	16 54
Joseph Marin.....	21 06
P. E. Molleer.....	7 14
Alma J. Perley.....	23 30
Proprietors of Locks & Canals.....	105 08

Amount carried forward..... \$ 895 52

Amount brought forward..... \$ 895 52

BRIDGE STREET.

John M. Kingsbury..... 57 88

BROADWAY.

Phineas Whiting..... 25 06

C. STREET.

Martin Honan..... 29 50

Mary J. Lindsay..... 58 90

CANTON STREET.

Findlay Stevenson..... 75 65

CHEEVER STREET.

M. Duprez 14 27

S. Farrington..... 12 99

George W. Harris..... 11 74

Emma R. Harris..... 11 74

A. Jodoin..... 22 40

Joseph Marin... . 6 37

Alma J. Perley... . 26 91

Proprietors of Locks and

Canals 90 59

Tremont & Suffolk Mills.... 45 54

CLARE STREET.

John Brady..... 17 37

John and Nora Flynn..... 33 11

Catherine Martin..... 17 50

H. W. Madel..... 52 85

P & L. McCrann..... 17 50

J. F. O'Brien..... 16 38

D. O'Donoghue..... 17 50

Whiting & Bradt..... 23 57

Whiting & Bradt..... 29 20

Amount carried forward \$ 1,610 04

Amount brought forward..... \$ 1,610 04

COBURN STREET.

F. C. Beharrell.....	85 10
F. T. Callahan.....	25 05
A. L. Dixon.....	23 62
Est. F. Murphy.....	26 28
A. C. Wheelock.....	48 93

CONCORD STREET.

C. T. Crosby.....	16 25
Patrick Finnerty.....	26 91
John F. Gallagher.....	16 80
Nellie Liston.....	16 80
Daniel Moynihan.. ..	16 29
Felix McCarron.....	16 80
Lizzie McKay.....	16 80
Robert Shepard.....	16 80
Smith & Shedd....	34 39

COOLIDGE STREET.

G. W. Harris.....	18 69
Annie S. Harlow.....	27 05
A. Jodoin.....	63 03
D. H. Laporte.....	13 69
Alma J. Perley.....	77 24
Proprietors of Locks & Canals....	19 97

CROWLEY STREET.

S. H. Davis.....	59 48
Wm. Kelley's Estate.....	24 99
J. E. Lowney.....	22 80

Amount carried forward..... \$ 2,320 80

Amount brought forward..... \$ 2,323 80

EIGHTEENTH STREET.

F. S. Coolidge.....	20 03
H. W. Clement.....	9 79
Frost & Randall.....	9 79
F. M. Jacques.....	19 55
John M. Kingsbury.....	23 33
E. C. Kennedy.....	9 79
A. E. Libby.....	19 55
R. K. Lane.....	19 55
W. R. Myers.....	9 79
Wm. J. Myers.....	9 79
M. A. Manning.....	22 65
John Ranks.....	9 79
Albion Sweatt.....	9 79
C. W. Sweatt.....	9 79
M. K. Tenney.....	19 90
E. H. Wentworth.....	19 58
C. F. Whittier.....	9 79

ELEVENTH STREET.

J. E. Gibson.....	33 00
Mary J. Swan.....	66 00

FOSTER STREET.

Mary A. Byam.....	38 87
E. W. Lachance.....	33 95
Betsey A. Persons.....	75 75
Mrs. M. E. Stowell.....	34 15
E. A. Smith.....	43 00
M. B. Stiles.....	52 46

HALL STREET.

F. M. Brogan.....	11 55
G. W. Harris.....	138 24
D. H. Laporte.....	28 77

Amount carried forward..... \$ 3,128 79

Amount brought forward..... \$ 3,128 79

HARVARD STREET.

Louis J. Fletcher.....	51 00
George W. Fifield.....	25 50
G. W. Knowlton.....	38 25

HOLYROOD AVENUE.

E. K. Baldwin.....	42 04
Luella B. Banks.....	42 04
C. H. and E. F. Coburn.....	30 62
Mary A. Cilley.....	21 63
George R. Dana.....	28 39
Protestant Episcopal Associa- tion.....	27 30
Joseph Smith.....	47 08
Shepard, Russell & Fuller...	148 13
Shepard, Russell & Fuller...	126 08
Shepard, Russell & Fuller...	21 00

HUMPHREY STREET.

W. Bennett.....	63 28
J. F. Haskell.....	44 70
W. H. Hutchins.....	57 19
Ellen Judge.....	27 75
H. B. Pettengill.....	20 25
D. L. Page.....	22 55
D. L. Page.....	22 35
Ann Page.....	22 25
Ann Page.....	46 15
Ann Page.....	22 75
Ann Page.....	23 25
E. T. Rowell.....	141 40
F. A. Taylor.....	57 32
Woods, Sherwood & Co.....	25 00

JUNE STREET.

H. H. Pettes.....	10 12
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Amount carried forward..... \$ 4,384 16

Amount brought forward..... \$ 4,384 16

LAKEVIEW AVENUE.

Benjamin Benoit..... 32 80

LANE STREET.

Emma C. Carll.....	16 72
Emma C. Carll	16 38
M. N. Cornock.....	20 29
C. T. Crosby.....	16 80
C. T. Crosby.....	16 80
A. E. O'Heir.....	23 24
S. S. Simpson.....	21 00

LAWRENCE STREET.

Frank K. Stearns..... 19 58

LINCOLN STREET.

A. Hurtubise.....	26 41
Est. G. Ingham.....	46 91

MADISON STREET.

John Frawley.....	6 30
Mary E. Hornby.....	5 50
F. & B. Markham.....	7 26
John O'Day.....	6 72

MARSHALL STREET.

L. H. Richardson.....	41 85
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Amount carried forward..... \$ 4,708 72

Amount brought forward \$ 4,708 72

McKINLEY AVENUE.

A. C. Stevens..... 124 64

MOODY STREET.

Ellen Breen.....	20 00
M. L. Condon.....	46 99
Noe Champagne.....	29 20
Margaret L. Condon.....	46 63
William Dunn	27 68
John H. Farley.....	20 00
V. Gelinas.....	15 20
V. Gelinas.....	20 22
James F. Hurley.....	46 00
L. N. Milot.....	20 00
John Norton.....	20 00
Props. Locks & Canals.....	67 66
Props. Locks & Canals.....	67 64
C. S. Robinson.....	20 00

MT. VERNON STREET.

Pro's. Locks & Canals..... 47 55

NESMITH STREET.

Thomas Costello 67 35

OAKLAND STREET.

A. A. Robinson..... 44 24

Amount carried forward..... \$ 5,459 72

Amount brought forward..... \$ 5,459 72

PINE STREET.

Annie F. Goodale.	56 94
A. A. Robinson	56 54
O. E. Underhill.....	51 06

PLEASANT STREET.

R. A. Cass.....	21 60
James A. Cole.....	21 67
Edward Cryan.....	20 70
Catherine Hickey.....	30 22
T. W. Johnson.....	27 00
Colin McDonald.....	34 78
John Mangan.....	18 40
Eliza Maguire.....	17 20
Ellen McDermott.....	18 40
John H. McNabb.....	16 04
E. A. Smith, et. als.....	141 31

PORTER STREET.

A. J. Ryan.....	54 52
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PRINCETON STREET.

Grace Universalist Church..	76 32
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RIVERSIDE STREET.

P. & C. Crowley.....	34 44
Heirs Isaac Holden.....	106 39
Patrick O'Hearn.....	149 10
J. J. Richards.....	42 19

Amount carried forward..... \$6,454 54

Amount brought forward..... \$ 6,454 54

ROCK STREET.

C. H. Allen..... 30 34

ROGERS STREET.

Edward Cawley..... 21 42

SCHOOL STREET.

Mrs. L. F. Howard.....	11 87
George E. Leonard.....	29 66
David B. Mears.....	9 79
Lydia Mears.....	7 23
A. H. Milliken.....	8 80
William A. Short.....	23 71
Est. R. Wood.....	10 72

SECOND AVENUE.

Daniel Callahan.....	8 64
J. W. Ellis.....	11 36
G. L. Hubbard.....	6 75
Michael Kelly.....	35 20
Catherine Mahoney.....	7 00
S. S. Page.....	7 62
William H. Payne.....	9 25
Mrs. E. Phillips.....	8 96
P. H. Riordan.....	11 20
Michael Stanton.....	8 10
D. S. Spaulding... ..	11 55
Philip Tighe.....	7 58
Michael J. Welch.....	8 10

Amount carried forward..... \$ 6,749 39

Amount brought forward..... \$ 6,749 39

SHAW STREET.

Ellen F. Blake.....	52 75
W. H. Besse.....	22 23
Est. T. F. Burgess.....	21 62
Kate B. Clark.....	22 23
Richard Dobbins.....	21 15
H. E. Haley.....	17 25
Lizzie B. Welch.....	20 87
B. F. Welch.....	22 09
W. P. Winning.....	8 22

SIDNEY STREET.

E. H. Aitken.....	23 14
Est. H. Craven.....	46 09
James Clegg.....	29 26
A. Fairbanks.....	23 00
George Hardman.....	49 16
James Small	23 00
James Small.....	49 55
Henry Smith.....	20 52
Eli Turner	27 60

SOUTH WALKER STREET.

Alice C. Greene.....	35 45
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STEVENS STREET.

Benjamin Dean, et als.....	23 17
H. C. Howe.....	54 18
M. B. Ranlett.....	41 60
V. M. Richardson.....	149 45
E. A. Smith.....	50 00
E. A. Smith.....	41 89
E. A. Smith.....	67 54
E. A. Smith.....	22 43

Amount carried forward..... \$ 7,734 83

Amount brought forward..... \$ 7,734 83

TUCKER STREET.

M. Duprez.....	96 38
Gardner & Delisle.....	31 80
G. W. Harris... ..	76 31
Felix Ouelette.....	34 86
Prop's. Locks & Canals	12 83
Aimet J. Vincent.....	38 90
Wilder & Dexter.....	75 53

WARWICK STREET.

J. H. Carmichael.....	56 20
H. O. Cushman.....	25 50
T. S. Hersey.....	25 50
James Moran.....	32 25
James O'Brien....	38 66
A. W. Parker.....	50 80
A. W. Parker.....	64 97

WESTFORD STREET.

Minnie Bradt.....	50 76
H. C. Fuller.....	49 90
M. H. Hamilton.....	34 32
Est. J. N. Marshall.....	78 12

WILLARD STREET.

Est. C. J. Cheney..... 65 24

\$ 8,673 66

DEBTS DUE THE CITY.

Taxes	\$	457,319 67	
Sidewalk Assessments.....		5,531 80	
Sewer Assessments.....		25,483 45	
Watering Streets Assessments.....		5,830 88	
Water Rates, service pipe, etc.....		44,382 52	
State Aid.....		14,712 50	
Military Aid.....		3,250 00	
Soldiers' Relief.....		621 50	
State Aid "War With Spain".....		1,816 00	
		<hr/>	\$ 558,948 32

REAL ESTATE OWNED BY THE CITY.

Memorial Building.....	\$	200,000	00
City Hall.....		410,000	00
Huntington and Jackson Halls.....		20,000	00
Market House.....		75,500	00
City Scales.....		750	00
High School-house, on Anne and Kirk Street.....		250,000	00
Bartlett School-house on Clark Street		15,000	00
New Bartlett School-house, on Wannalancit Street.....		108,000	00
Butler School-house, on Gorham Street.....		63,000	00
Colburn School-house, on Lawrence Street		17,000	00
Edson School-house, on Highland Street.....		25,000	00
Franklin School-house, on Branch Street.....		25,000	00
Green School-house, on Merrimack Street.....		105,000	00
Moody School-house, on Rogers Street.....		80,000	00
Mann School-house, on Lewis Street.....		20,000	00
Varnum School-house, on Myrtle Street.....		110,000	00
Highland School-house, on Pine Street.....		67,000	00
Pawtucket School-house, on Mammoth Road.....		53,000	00
Lincoln School-house.....		77,000	00
Oaklands School-house.....		12,000	00
Primary School-house, on Powell Street, near Liberty Street		8,000	00
Primary School-house, on Powell Street, near Chelmsford Street.....		21,000	00
Primary School-house, on London Street.....		1,000	00
Primary School-house, on School Street.....		7,500	00
Primary School-house on Pond Street.....		6,000	00
Primary School-house, on High Street.....		9,000	00
Primary School-house on Carter Street		49,000	00
Primary School-house, on Fayette Street.....		3,500	00
<i>Amount brought forward...</i>	\$	1,838,250	00

AUDITOR'S REPORT.

Amount brought forward \$ 1,838,250 00

Primary School-house, on Cross Street.....	24,000 00
Primary School-house, on Billings Street.....	16,000 00
Primary School-house, on Cabot Street.....	23,500 00
Primary School-house, on Cornell and Middlesex Streets.....	16,000 00
Primary School-house, on West Sixth Street.....	7,000 00
Primary School-house, on Mammoth Road.....	1,500 00
Primary School-house, on Lakeview avenue.....	8,000 00
Primary School-house, on Ames Street.....	8,000 00
Primary School-house, on Tenth Street.....	9,000 00
Primary School-house, on Favor Street.....	28,000 00
Primary School-house on Cottage Street.....	4,500 00
Primary School-house, on Charles Street	20,000 00
Training School-house, on Charles Street.....	31,000 00
Primary School-house, on Cheever Street.....	12,000 00
Primary School-house, on London Street.....	5,000 00
Primary School-house, on Chapel Street.....	4,000 00
Primary School-house, on Central Street.....	13,500 00
Primary School-house, on Howard Street.....	5,000 00
Primary School-house, on Worthen Street.....	25,000 00
Primary School-house, on Lyon Street.....	20,000 00
Primary School-house, on Dover Street.....	13,500 00
Primary School-house, on Common Street.....	19,000 00
Primary School-house, on Agawam Street.....	9,000 00
Primary School-house, on Grand Street.	5,000 00
Primary School-house, on Varnum avenue.....	500 00
Primary School-house, on Kirk Street.....	18,000 00
Primary School-house, at Middlesex Village.....	2,000 00
Primary School-house, on Weed Street.....	10,500 00
Hose Carriage-house, on Fletcher Street.....	18,000 00
Hose Carriage-house, on Central Street.....	11,000 00
Hose Carriage-house, on Warren Street.....	11,000 00
Engine-house, on Gorham Street.....	15,000 00
Engine-house, on Lincoln Street.....	5,500 00
Engine-house and Ward-room, on Branch Street...	22,000 00
Engine-house and Ward-room, on Fourth Street...	15,000 00
Engine-house, on Palmer Street.....	76,000 00
Engine-house and Ward-room, on High Street.....	24,000 00
Engine-house, on Westford Street	18,000 00
Chemical Engine-house, on Merrimack Street.....	5,000 00
City Farm and Buildings.....	200,000 00
Land and Buildings on Fletcher Street.....	3,500 00
Land and Buildings on Fletcher, Cross and La- grange Streets and Broadway.....	100,000 00
Public Landing in rear of Market House and Police Stable.....	9,500 00

Amount carried forward..... \$ 2,730,250 00

Amount brought forward..... \$ 2,730,250 00

Primary School-house, on Lexington Avenue.....	10,000 00
Primary School-house, on Moody Street.....	20,000 00
Primary School-house, on Pine Street.....	23,000 00
Lot of Land on Chelmsford Street.....	5,000 00
Lot of Land on Fletcher and Bowers Streets.....	20,000 00
Lot of Land on First Street.....	190 00
Lot of Land on Tenth Street.....	5,000 00
North Common.....	112,900 00
Engine-house, on Lawrence Street.....	26,000 00
Engine-house on Mammoth Road.....	15,000 00
South Common.....	224,800 00
Mount Vernon Park.....	2,000 00
Belvidere Park.....	10,000 00
Wilson Park.....	1,600 00
Rogers Fort Hill Park.....	150,000 00
Tyler Park.....	5,000 00
Lot of Land on John Street.....	18,000 00
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	\$3,378,740 00

Water Works.

The Real Estate and Personal Property belonging to the City, occupied and used by the Water Works.....	\$4,324,608 17
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Burial Grounds Owned by the City.

No. 1 Burial Ground, on School Street.
No. 2 Burial Ground, on Gorham Street.
Edson Cemetery, on Gorham Street.

REAL AND PERSONAL PROPERTY OWNED BY THE CITY.

Real Estate.....	\$ 3,378,740 00
Water Works.....	4,324,608 17
Personal Property in care of Superintendent of Schools.....	30,000 00
Personal Property in care of Superintendent of Streets, belonging to Streets.....	29,995 55
Personal Property in care of Superintendent of Streets, belonging to Watering Streets.....	8,775 23
Personal Property in care of Superintendent of Streets, belonging to Sewers and Drains.....	21,170 47
Personal Property in care of Superintendent of Streets, belonging to Boulevard.....	3,756 05
Personal Property in care of City Engineer.....	1,700 00
Personal Property in care of Superintendent of In- stitutions, at City Farm.....	27,043 50
Personal Property in care of Secretary of Overseers of the Poor.....	4,349 63
Personal Property in care of City Librarian.....	60,000 00
Personal Property in care of the Chief Engineer of the Fire Department.....	117,000 00
Personal Property in care of Street Lights.....	21,000 00
Personal Property in care of Board of Health.....	10,175 00
Personal Property in care of Sealer of Weights and Measures.....	250 00
Personal Property in care of Superintendent of Pub- lic Buildings, not mentioned below.....	6,000 00
<i>Amount carried forward</i>	<u>\$ 8,044,563 60</u>

REAL AND PERSONAL PROPERTY OWNED BY THE CITY. 281

Amount brought forward..... \$ 8,044,563 60

Personal Property in care of Superintendent of City Cemeteries.....	1,512 00
Personal Property in care of Superintendent of Commons.....	1,159 32
Personal property in care of Milk Inspector.....	800 00
Furniture in School-houses.....	18,000 00
Bell on High Street Church.....	500 00
Clock on High Street Church.....	500 00
Personal Property in care of Superintendent of Police	17,000 00
Personal Property in care of Chief of Department of Supplies	900 00
Personal Property in care of Superintendent of City Scales.....	225 00
Debts due the City.....	558,948 32
Cash in Treasury.....	232,349 27
	<hr/>
	\$ 8,876,457 51

COST OF SEWERS LAID IN 1898.

Aiken Street—From the sewer at Perkins Street, southerly, a distance of three hundred thirty (330) feet.....	\$ 682 10
Anderson Street. (Unfinished)—From the sewer in Gorham Street, easterly, a distance of twenty-three (23) feet.....	86 47
Corbett Street. (Unfinished)—From the sewer in Gorham Street, easterly, a distance of thirty-four (34) feet.....	51 48
Fifth Avenue and Avon Street—From the end of the Fifth Avenue sewer at Mt. Hope Street, easterly in Fifth Avenue a distance of six hundred thirty-nine (639) feet to Moody Street and in Avon Street from the sewer in Fifth Avenue northerly, a distance of seven hundred thirteen (713) feet, to Seventh Avenue.....	11,745 28
Gorham and Carlisle Streets—From the end of the sewer at Cosgrove Street southerly in Gorham and Carlisle Streets, a total distance of one thousand two hundred sixty-eight (1268) feet..	3,558 39
Hanks Street and Belrose Avenue—From the sewer in Hanks Street at Rogers Street southerly in Hanks Street to Belrose Avenue and easterly in Belrose Avenue to Warren Avenue, a total distance of seven hundred sixty-five (765) feet....	3,303 69
Methuen Street—From the sewer formerly laid at Beacon Street easterly in Methuen Street, a distance of two hundred seventy-six (276) feet.	768 66
Myrtle Street Extension. (Unfinished).....	704 54
<i>Amount carried forward</i>	\$ 20,900 61

<i>Amount brought forward</i>	\$	20,900 61
Oaklands Main. (Completed)—From the end of the sewer laid in 1897 southerly in Wentworth Avenue, a distance of one hundred ninety (190) feet, to Glenwood Street.....		2,496 17
Parkview Avenue and Mansur Street—From the sewer in Wentworth Avenue easterly in Mansur Street to Parkview Avenue, and southerly in Parkview Avenue, a total distance of two thousand thirty (2030) feet.....		7,122 62
Pine Street (Unfinished)—From the end of the Pine Street sewer at Burr Street westerly, a distance of one thousand six hundred seventy-four (1674) feet.....		8,122 30
Plain Street to Brewery—From the end of the Plain Street sewer southerly, a distance of six hundred forty (640) feet.....		816 62
Powell Street and Winthrop Avenue—From the end of the Powell Street sewer at A Street southerly to Winthrop Avenue, and westerly in Winthrop Avenue, a total distance of six hundred seventy-two (672) feet.....		998 38
Princeton Street—From the sewer at Livingston Avenue northerly, a distance of one hundred forty-one (141) feet.....		340 11
Princeton Street—From the end of the sewer at Sayles Street westerly, a distance of five hundred forty-one (541) feet.....		1,515 47
Read Street Extension (Unfinished).....		340 10
Richardson Street—From the Centralville Main Sewer easterly, a distance of five hundred ninety-eight (598) feet.....		2,175 17
Shaw Street Extension—From the sewer in Wilder Street westerly to Bennett Street, northerly in Bennett Street to a new street leading to Stevens Street, westerly in said new street to Stevens Street and northerly in Stevens Street to Pine Street, a total distance of one thousand two hundred sixteen (1216) feet.....		19,647 86
South Common and B. & M. R. R. (Repairs).		2,790 08
Tanner and Howard Streets. (Unfinished—From the Intercepting Sewer at St. Hyacinth Street easterly in Tanner Street to Howard Street, and northerly in Howard Street, a total distance of one thousand one hundred eight (1108) feet...		11,801 87
<i>Amount carried forward</i>	\$	79,067 36

Amount brought forward..... \$ 79,067 36

Upham Street—From the sewer in Chelmsford Street westerly, a distance of three hundred ten (310) feet..... 917 55

Varney Street—From the sewer in Mt. Vernon Street, northerly, a distance of two hundred thirty-two (232) feet..... 426 08

Wentworth Avenue—From the end of the Oaklands Main Sewer at Glenwood Street, southerly, a distance of one thousand eight hundred twenty-seven (1827) feet to a point opposite No. 250 Wentworth Avenue..... 9,833 09

Total cost of sewers constructed in 1898..... \$ 90,244 08

Cost of sewers constructed previous to 1898..... 2,297,731 33

Total cost of construction of sewers to Jan. 1, 1899. \$ 2,387,975 41

DAVID CHASE, *Auditor.*

**ACCOUNT OF THE CITY TREASURER AND
COLLECTOR OF TAXES FOR THE
YEAR 1898.**

LOWELL, MASS., Jan. 2, 1899.

TO THE HONORABLE, THE CITY COUNCIL :

Gentlemen : — I have the honor to submit the following report of the receipts and expenses of the City of Lowell for the financial year 1898.

Respectfully submitted,

CHARLES F. COBURN,

City Treasurer and Collector of Taxes.

Charles F. Coburn, City Treasurer and Collector of Taxes, in

Dr. To cash received on account of :

Cash balance from 1897.....	\$ 3,087 72
Assessors.....	92 04
Cemeteries.....	7,444 83
City Clerk.....	1,549 68
City Debt.....	30,100 00
City Sealer.....	443 36
City Weigher.....	283 64
City Treasurer.....	2,233 38
Commons.....	771 96
Elections.....	17 84
Grade Crossings.....	28,081 75
Appropriation Loan.....	200,000 00
Engineering.....	9,120 61
Fire Department.....	468 52
Health.....	3,288 82
Huntington Hall.....	210 77
Incidentals.....	25 60
Interest.....	25,734 02
Inspection of Milk and Vinegar..	144 50
Law Department.....	63 28
Liquor Licenses.....	155,907 25
Library.....	3,996 77
Mayor.....	43 55
Military Aid.....	3,598 50
Paupers, Almshouse.....	15,390 83
Paupers, Out Door Relief.....	5,453 19
Paving Chelmsford Street.....	12 00
Paving Gorham Street.....	521 36
Police.....	10,738 53
Public Buildings.....	2,834 98
Schools.....	1,989 70
School Houses.....	4,035 68

\$ 517,684 66

Amount carried forward.....

\$ 517,684 66

account with the City of Lowell for the Financial Year 1898.

By cash paid on account of :

Cr.

Abatement of taxes.....	\$ 206 47
Assessors.....	20,823 73
Auditor.....	3,415 16
City Cemeteries.....	8,459 13
City Clerk.....	5,135 59
City Debt.....	304,700 00
City Messenger.....	1,651 43
City Sealer.....	382 84
City Weigher.....	800 00
Care of City Hall.....	7,706 54
City Treasurer.....	9,376 94
Commons	13,107 65
Elections	10,891 41
Grade Crossings.....	1,794 69
Engineering.....	16,482 49
Fire Department	119,369 54
Health	41,026 78
Heating City Hall and Memorial Building	6,067 98
Huntington Hall	1,658 26
Incidentals.....	7,526 26
Interest	119,144 78
Inspection of animals and provisions	500 00
Inspection of milk and vinegar.....	1,927 88
Law Department.....	7,347 93
Liquor Licenses.....	39,238 50
Lowell & Tyngsborough highway..	2,543 41
Library	15,065 34
Lighting	87,968 40
Mayor	4,691 70
Military Aid	6,525 00
Paupers, Almshouse.....	56,853 53
Paupers, Out Door Relief.....	52,026 89
Paving Aiken Street.....	2,084 50
Paving Chelmsford Street.....	6,013 07
Paving Gorham Street.....	21,572 20
Police	122,637 94
Public Buildings.....	15,336 33
Schools	273,458 77
School Houses	62,629 95
Addition to Varnum School.....	29,882 02
Bartlett School	1,037 88
Addition to Plain Street School....	155 22
Moody Street School.....	14,710 18

Carried forward..... \$ 1,523,934 31

Charles F. Coburn, City Treasurer and Collector of Taxes, in

DR. To cash received on account of:

<i>Brought forward</i>	\$ 517,684 66
Addition to Varnum School	1,130 00
Sewers, Construction	30,000 00
Sewers, Maintenance	17,225 47
Soldiers Relief	882 00
State Aid	14,964 00
Streets	18,459 60
Supply Department	125 00
Taxes of 1894	2 00
Taxes of 1895	3,858 00
Taxes of 1896	61,567 74
Taxes of 1897	125,402 52
Taxes of 1898	1,069,628 49
Corporation Tax	68,201 05
National Bank Tax	4,548 87
Temporary Loans	1,250,000 00
Water Works	194,291 30
Watering Streets	11,009 26
General Treasury Fund	1,341 97
Extension of Aiken Street	21 00
Extension of Aiken Street to Mer-	
rimack street	30,100 00
Widening Andover Street	35,010 50
Extension of Lundberg Street	25,000 00
Blanket Loan	48,000 00
State Aid, Spanish War	5,266 75
Huntington Hall Rebuilding	36,000 00
	<hr/>
	\$ 3,569,720 18

\$ 3,569,720 18

account with the City of Lowell for the Financial Year 1898.

By cash paid on account of:

CR.

<i>Brought forward</i>	\$ 1,523,934 31	
Carter Street School.....	517 11	
Rifle Range.....	679 32	
Sewers, construction.....	104,988 69	
Sewers, maintenance.....	15,897 75	
High School Sinking Fund	3,006 00	
Intercepting Sewer Sinking Fund..	5,000 00	
High Service Water Supply Sinking Fund	1,800 00	
Extension Fort Hill Park Sinking Fund	6,000 00	
City Hall and Memorial Bldg. Sink- ing Fund	7,500 00	
Water Loan Sinking Fund.....	16,000 00	
New School Houses Sinking Fund..	4,000 00	
Soldiers Relief.....	8,210 23	
State Aid ..	14,813 00	
State Aid, Office Expenses	1,696 98	
Streets	150,475 74	
Supply Department.....	5,337 47	
Corporation Tax	26 56	
County Tax.....	65,861 96	
National Bank Tax.....	17,335 86	
State Tax.....	44,634 29	
Temporary Loans.....	1,075,000 00	
Lowell Textile School.....	5,000 00	
Water Works	197,469 00	
Watering Streets... ..	9,733 90	
Refunded License Fees.....	50 00	
Extension of Aiken Street.....	9,972 71	
Soldiers & Sailors Memorial Tablets.	1,186 38	
Insurance	1,425 00	
Widening Andover Street.....	19,314 74	
Bridge Street Bicycle Path.....	843 05	
Extension of Lundberg Street. . .	4,124 85	
Paving Westford Street.....	7 00	
State Aid, Spanish War.....	1,889 75	
Extension of Beech Street.....	1,187 43	
Observance of Labor Day	400 00	
Huntington Hall Rebuilding.....	4,878 50	
Corporation Tax Fund.....	7,173 33	
	<hr/>	
		\$ 3,337,370 91
Cash balance Jan. 1, 1899.....		232,349 27
		<hr/>
		\$ 3,569,720 18
		<hr/>

STATEMENT OF CITY TREASURER RELATING TO SPECIAL FUNDS FOR CARE OF PUBLIC BURIAL GROUNDS.

LOWELL, MASS., Jan. 2, 1899.

TO THE HONORABLE, THE CITY COUNCIL OF THE CITY OF
LOWELL :

Gentlemen — I have the honor to submit the following statement of special funds in my hands, deposited for perpetual care of lots in the public burial grounds of the City of Lowell :

On hand Jan. 1, 1898..... \$ 7,650 00

Received during the year :

From Alfred Kay..... 100 00

Andrew Mungall..... 100 00

L. E. Kimball, Ex'r for Geo.

E., Wm. A., and Walter

S. Magee..... 200 00

Daniel A. Eaton..... 100 00

Joseph Fleming..... 100 00

Fred L. Abbott..... 100 00

Enoch Messenger..... 100 00

Elizabeth Poor..... 100 00

Mrs. Addie Mackenzie..... 100 00

Sarah A. Gilbert..... 100 00

John C. Bennett... 100 00

James Templeton..... 100 00

Josephine L. Hitchcock..... 100 00

Phoebe W. Sanborn..... 100 00

Priscilla Welch..... 100 00

Amount carried forward..... \$ 9,250 00

Brought forward \$ 9,250 00

Emma C. Dean.....	100 00
George B. Smith.....	100 00
Matthew Huntley.....	100 00
Mary A. Davis.....	100 00
William H. Shedd, Ex'r....	100 00
Lucy A. Hobart.....	100 00
Samuel F. Bicknell.....	100 00
William Haworth.....	100 00
Mary T. Dyson, Gdn. Bonden	
Heirs	100 00

Total	\$ 10,150 00
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The above amount is invested as follows :

Central Savings Bank.....	\$ 1,000 00
City Institution for Savings.....	1,150 00
Traders' National Bank... ..	1,650 00
Lowell Five Cent Savings Bank....	1,500 00
Washington Savings Institution....	1,500 00
Lowell Institution for Savings.....	1,700 00
Mechanics' Savings Bank.....	1,650 00
	\$ 10,150 00

Respectfully submitted,

CHAS. F. COBURN,

City Treasurer.

REPORT OF THE COMMISSIONERS OF SINK- ING FUNDS FOR THE YEAR 1898.

LOWELL, MASS., January 2, 1899.

TO THE HONORABLE, THE CITY COUNCIL OF THE CITY OF
LOWELL :

Gentlemen — The Commissioners of Sinking Funds of the City of Lowell, have the honor to submit the following report of the several Sinking Funds of said City, and of the Hapgood Wright Centennial Trust Fund, for the year 1898 :

Full value of all Sinking Funds Jan. 1, 1899.....		\$	506,870	26
Full value of all Sinking Funds Jan. 1, 1898.....			446,572	18
Increase during the year 1898..		\$	60,298	08
Value of Water Loan Sinking Funds Jan. 1, 1899.....	\$	246,916	45	
Value of Water Loan Sinking Funds Jan. 1, 1898:.....		220,846	52	
Increase during the year 1898..	\$	26,069	93	
Value of all other Sinking Funds Jan. 1, 1899.....	\$	259,953	81	
Value of all other Sinking Funds Jan. 1, 1898.....		225,725	66	
Increase during the year 1898..	\$	34,228	15	
Total increase as above.....		\$	60,298	08

Value of Hapgood Wright Centennial Trust Fund, Jan. 1, 1899..	\$ 2,595 25
Value of Hapgood Wright Centennial Trust Fund, Jan. 1, 1898..	2,495 47
	<hr/>
Increase during the year 1898..	\$ 99 78
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A statement of the receipts, payments and present value of the several Sinking Funds, and a list of the securities in each fund, follows :

	SECURITIES.	CASH.	TOTAL.
Water Loan Sinking Fund.			
On hand Jan. 1, 1898.....	\$182,500 00	\$ 727 29	\$183,227 49
Received during 1898:			
Cash— Annual appropriation.....		16,000 00	
Income on investments		7,730 00	
Income on bank deposits		182 08	
Securities matured		27,000 00	
Securities bought during 1898.	44,000 00		
Paid during 1898 for securities	\$226,500 00	\$ 51,639 57	
		45,410 17	
On hand Jan. 1, 1898.....	\$199,500 00	6,229 40	205,729 40
Increase during 1898			22,501 91
Securities belonging to this fund.....			
3 City of Springfield coupon bonds, \$1,000 6 per cent.	3,000 00		
4 City of Lewiston coupon bonds, \$1,000 5 per cent.	4,000 00		
1 City of Portsmouth coupon bond, \$1,000 4 per cent.	1,000 00		
1 City of Portsmouth coupon bond, 1,500 4 per cent.	1,500 00		
16 City of Everett registered bonds, \$1,000, 4 per cent.	16,000 00		
14 Town of Sharon coupon bonds, \$1,000, 4 per cent.	14,000 00		
12 Town of Athol coupon bonds, \$1,000, 4 per cent...	12,000,00		
1 City of Boston registered bond, \$61,000, 4 per cent.	61,000 00		
5 City of Manchester coupon bonds, \$1,000, 4 per cent.	5,000 00		
15 City of Portsmouth coupon bonds, \$1,000, 4 percent.	15,000 00		
14 City of Waterville, Me, coupon bonds, \$1,000, 4 p. c.	14,000 00		
9 City of Saginaw, Mich., coupon bonds, \$1,000, 4 p. c	9,000 00		
4 City of Saginaw, Mich., coupon bonds, \$1,000, 4 p. c.	4,000 00		
1 City of Lowell, serial bond, 3½ per cent.....	25,000 00		
15 Fitchburg R. R. coupon bonds, 4 per cent.....	15,000 00		
			\$199,500 00
Cash on deposit in Appleton National Bank, 3½ p. c..			6,229 40
Total			\$205,729 40

	SECURITIES.	CASH.	TOTAL.
High Service Water Loan Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 37,500 00	\$ 119 03	\$ 37,619 03
Received during 1898:			
Cash — Annual appropriation.....		1,800 00	
Income on investments		1,725 00	
Income on bank deposits.....		43 02	
On hand Jan. 1, 1899.....	\$ 37,500 00	\$ 3,687 05	41,187 05
Increase during 1898.....			\$ 3,568 02
Securities belonging to this fund:			
2 Town of Beverly coupon bonds, \$1,000, 4 per cent.	\$ 2,000 00		
4 City of Providence coupon bonds, \$1,000, 5 per cent.	4,000 00		
8 City of Providence coupon bonds, \$1,000, 5 per cent.	8,000 00		
1 City of Cambridge coupon bond, \$1,000, 6 per cent.	1,000 00		
4 Town of Danvers coupon bonds, \$1,000, 5 per cent.	4,000 00		
1 Town of Pawtucket coupon bonds, \$500, 5 per cent.	500 00		
5 Town of Rockport coupon bonds, \$1,000, 4 per cent.	5,000 00		
1 City of Lynn registered bond, \$6,000, 4 per cent....	6,000 00		
4 Town of Bradford registered bonds, \$500, 4 per cent.	2,000 00		
1 City of Portsmouth coupon bond, \$1,000, 4 per cent.	1,000 00		
4 City of Saginaw, Mich., coupon bonds, \$1,000, 4 per cent.....	4,000 00		\$ 37,500 00
Cash on deposit in Appleton National Bank, 3½ per cent.....			3,687 05
Total			\$ 41,187 05

	SECURITIES.	CASH.	TOTAL.
City Hall and Memorial Bldg. Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 81,000 00	\$ 595 75	\$ 81,595 95
Received during 1898			
Cash — Annual appropriation.....		7,500 00	
Income on investments.		3,313 33	
Income on bank deposits		111 88	
Securities matured.....		3,000 00	
Securities bought during 1898.....	9,000 00		
	\$ 90,000 00	\$ 14,520 96	
Paid during 1898 for securities :		9,660 67	
On hand Jan. 1, 1899.....	\$ 87,000 00	\$ 4,860 29	91,860 29
Increase during 1898			\$ 10,264 54
Securities belonging to this fund :			
16 Town of Bradford coupon bonds, \$4,000, 4 per cent.	\$ 16,000 00		
5 City of Brockton coupon bonds, \$1,000, 4 per cent..	5,000 00		
1 Town of Reading coupon bond, \$1,000, 4 per cent..	1,000 00		
6 Town of Wrentham coupon bonds, \$1,000, 4 per cent	6,000 00		
9 Town of Arlington coupon bonds, \$1000, 4 per cent.	9,000 00		
1 City of Boston registered bond, \$21,000, 4 per cent.	21,000 00		
7 City of Portsmouth coupon bonds, \$1,000, 4 per cent.	7,000 00		
8 Town of Stoughton coupon bonds, \$1,000, 4 p. c.	8,000 00		
4 City of Saginaw, Mich., coupon bonds, \$1,000, 4 p. c.	4,000 00		
1 City of Brockton registered bond, \$1,000, 4 per cent.	1,000 00		
3 City of Saginaw, coupon bonds, 4 per cent.	3,000 00		
6 Fitchburg R. R. coupon bonds, 4 per cent....	6 000 00		\$ 87,000 00
Cash on deposit in Appleton National Bank, 3½ per cent.....			4,860 29
Total.....			91,860 29

	SECURITIES.	CASH.	TOTAL.
Intercepting Sewer Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 91,500 00	\$ 1,986 07	\$ 93,486 07
Received during 1898:			
Cash — Annual appropriation.....		5,000 00	
Income on investments.....		4,245 00	
Income on bank deposits..		104 57	
Securities bought during 1898.....	\$ 4,000 00		
	\$ 95,500 00	\$ 11,335 34	
Paid during 1898 for securities:		4,149 96	
On hand Jan. 1, 1899.....	\$ 95,500 00	\$ 7,185 68	102,685 68
Increase during 1898.....			\$ 9,199 61
Securities belonging to this fund:			
4 City of Providence registered bonds, \$10,000, 5 per cent.....	\$ 40,000 00		
3 City of Providence registered bonds, \$1,000, 6 per cent.....	3,000 00		
1 City of Providence coupon bond, \$1,000, 5 per cent.....	1,000 00		
1 State of New Hampshire coupon bond, \$500, 6 per cent.....	500 00		
10 City of Melrose coupon bonds, \$1,000, 4 per cent..	10,000 00		
8 City of Melrose coupon bonds, \$1,000, 4 per cent...	8,000 00		
1 City of Lynn registered bond, \$1,000, 4 per cent....	14,000 00		
6 Town of Bradford registered bonds, \$500, 4 per cent.	3,000 00		
5 City of Portsmouth coupon bonds, \$1,000, 4 per cent.	5,000 00		
7 City of Indianapolis coupon bonds, \$1,000, 4 per cent.	7,000 00		
1 City of Lowell registered bond, 3½ per cent.....	2,000 00		
2 City of Saginaw coupon bonds, 4 per cent.....	2,000 00		
Cash on deposit in Appleton National Bank, 3½ per cent.....			\$ 95,500 00
			7,185 68
Total			\$102,685 68

	SECURITIES.	CASH.	TOTAL.
High School Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 22,710 29	\$ 571 85	\$ 23,282 14
Received during 1898:			
Cash — Annual appropriation.....		3,000 00	
Income on investments.....		957 36	
Income on bank deposits.....		50 61	
Securities matured.....		1,000 00	
Securities bought during 1898	4,000 00		
	\$ 25,710 29	\$ 5,579 82	
Paid during 1898 for securities.....		4,302 44	
On hand Jan. 1, 1899.....	\$ 26,710 29	\$ 1,277 38	26,987 67
Increase during 1898.....			\$ 3,705 53
Securities belonging to this fund:			
1 City of Keene coupon bond, \$500, 4 per cent	\$ 500 00		
1 City of Salem coupon bond, \$1,000, 5 per cent.....	1,000 00		
1 City of Lynn coupon bond, \$1,000, 5 per cent.....	1,000 00		
1 City of Lowell registered bond, \$210.29, 3½ per cent.	210 29		
12 City of Taunton coupon bonds, \$1,000, 4 per cent..	12,000 00		
2 Town of Bradford registered bonds, \$500, 4 per cent.	1,000 00		
2 City of Portsmouth coupon bonds, \$1,000, 4 per cent.	2,000 00		
4 City of Indianapolis, Ind., coupon bonds, \$1,000, 4 per cent.....	4,000 00		
4 Fitchburg R. R. coupon bonds, \$1,000, 4 per cent...	4,000 00		\$ 25,710 29
Cash on deposit in Appleton National Bank, 3½ per cent.....			1,277 38
Total.....			\$ 26,987 67

	SECURITIES.	CASH.	TOTAL.
Extension of Rogers Fort Hill Park Loan Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 23,000 00	\$ 687 03	\$ 23,687 03
Received during 1898:			
Cash — Annual appropriation		6,000 00	
Income on investments		940 00	
Income on bank deposits.....		33 74	
Securities bought during 1898	1,000 00		
	\$ 24,000 00	\$ 7,660 77	
Paid during 1898 for securities		1,069 00	
On hand Jan. 1, 1899.....	\$ 24,000 00	\$ 6,591 77	30,591 77
Increase during 1898.....			\$ 6,904 74
Securities belonging to this fund:			
5 Town of Danvers coupon bonds, \$1,000, 4 per cent. \$ 5,000 00			
1 City of Brockton registered bond, \$1,000, 4 per cent. 1,000 00			
1 City of Lynn registered bond, \$5,000, 4 per cent. ... 5,000 00			
6 City of Malden coupon bonds, \$1,000, 4 per cent. ... 6,000 00			
6 City of Indianapolis coupon bonds \$1,000, 4 per cent. 6,000 00			
1 City of Saginaw coupon bond, \$1,000, 4 per cent. ... 1,000 00			\$ 24,000 00
Cash on deposit in Appleton National Bank, 3½ per cent.....			6,591 77
Total.....			\$ 30,591 77
New School Houses Sinking Fund.			
On hand Jan. 1, 1898.....	\$ 3,000 00	\$ 674 67	\$ 3,674 67
Received during 1898:			
Cash — Annual appropriation		4,000 00	
Income on investments.....		120 00	
Income on bank deposits.....		33 73	
On hand Jan. 1, 1899.....	\$ 3,000 00	\$ 4,828 40	\$ 7,828 40
Increase during 1898			\$ 4,153 73

	SECURITIES.	CASH.	CASH.
Securities belonging to this fund:			
3 City of Indianapolis coupon bonds, \$1,000, 4 per cent.....	\$ 3,000 00		\$ 3,000 00
Cash on deposit in Appleton National Bank, 3 $\frac{3}{4}$ per cent.....			4,828 40
Total			\$ 7,828 40
<hr/>			
Hapgood Wright Centennial Trust Fund.			
On hand Jan. 1, 1898.....		\$ 2,495 47	\$ 2,495 47
Received during 1898:			
Cash — Interest on bank deposits.....		99 78	
On hand Jan. 1, 1899.....		\$ 2,595 25	2,595 25
Increase during 1898.....			\$ 99 78
Securities belonging to this fund:			
Cash — Deposited in Lowell Institution for Savings.		\$ 535 66	
Deposited in City Institution for Savings....		2,059 59	\$ 2,595 25
Total.....			\$ 2,595 25

Respectfully submitted,

A. K. CHADWICK,
F. A. BUTTRICK,
C. L. KNAPP,

*Commissioners of Sinking Funds for the
City of Lowell for the year 1898.*

REPORT OF ACCOUNTANT.

LOWELL, MASS., March 13, 1899.

LUCIUS A. DERBY, Esq., Chairman Committee on Accounts,
Lowell, Mass.

MY DEAR SIR:— Having completed an examination of the books and accounts of the City Treasurer for the year 1898, I have the honor to submit the following report:

The cash in the office at close of business Feb. 9, 1899, verified by actual count was.....	\$	17,169 79
Deposit in Lowell Trust Company, as certified by the accompanying letter.....	\$	205,854 04
Less checks outstanding.....		1,631 64
		<hr/> 204,222 40
Amount.....	\$	221,392 19
Cash balance Feb. 9, 1899, at close of business.....		221,392 19

The debit entries on the cash book were checked as far as possible from the books of original entry. The credit entries were properly vouched.

I examined the coupon payments for the year, and found them correct, with the following amounts unpaid:

Water Loan Bond.....	Due Nov. 1, 1897...	\$ 220
Water Loan Bond.....	Due May 1, 1898....	260
City Hall & Mem. Bld. Loan Bonds....	Due Oct. 1, 1898....	80
Intercepting Sewer Loan Bonds.....	Due Oct. 2, 1898....	60
Water Loan Bonds.....	Due Nov. 1, 1898...	1,100
Total.....		<hr/> \$1,720

The list of unclaimed cash and checks in envelopes on hand at last examination was verified.

Vouchers were shown for the monies paid, the balance being still unclaimed. I herewith submit a complete list on hand Feb. 9, 1899.

The taxes, water rates and street watering collections were verified by a trial balance of the several years' accounts unsettled.

These trial balances were sufficiently close to assure me of the correctness of the receipts.

I verified the Treasurer's statement relating to Special Trust Funds for care of lots in Public Burial Grounds.

At the request of the Commissioners of Sinking Funds I made a careful examination of the books and securities of the several funds, and found them correct, and I have so certified to Mr. Austin K. Chadwick, the chairman of the Commission. At their request I gave to each Commissioner and to the Mayor a detailed list of the securities belonging to each fund.

Respectfully submitted,

CLARENCE W. WHIDDEN, *Accountant.*

LOWELL TRUST COMPANY,)
LOWELL, MASS., March 2, 1899.)

CLARENCE W. WHIDDEN, *Auditor*,
LOWELL, MASS.

DEAR SIR: In accordance with your request, we beg leave to state that the balance of the City of Lowell at this bank, at the close of business February 9th, 1899, was \$205,854.04.

Yours Truly,

LOWELL TRUST COMPANY,
GEO. M. HARRIGAN, *Actuary*.

LOWELL, MASS., March 13, 1899.

AUSTIN K. CHADWICK, Esq., Chairman Commissioners of
Sinking Funds, Lowell, Mass.

DEAR SIR: Having completed an examination of the several sinking funds I have the honor to submit the following report: I found in each fund that the coupons or interest due for 1898 on each investment were accounted for in the cash. Vouchers were shown for purchases.

The cash balances deposited in the Appleton National Bank were certified by the attached certificate. The securities were examined and found correct as listed.

I attach also a detailed list of the securities belonging to each fund showing the investments, rates and maturities, and the condition of the several funds on March 13, 1899.

Respectfully submitted,

CLARENCE W. WHIDDEN, *Accountant*.

APPLETON NATIONAL BANK. }
 LOWELL, MASS., March 13, 1899. }

C. W. WHIDDEN, *Auditor*.

DEAR SIR: The following balances as shown by our books on the 7th of March are :

Commissioners of Sinking Funds, City Hall and Memorial	
Building.....	\$5,880 29
Water Loan Fund	9,126 90
Extension Rogers Park Fund.....	6,711 77
High School Building Fund.....	1,481 06
High Service Water Loan Fund.....	4,317 05
Intercepting Sewer Fund	8,995 68
New School Houses Sinking Fund.....	4,888 40

FRED H. ELA,
Cashier.

**SUMMARY STATEMENT OF THE CONDITION
OF THE SEVERAL SINKING FUNDS,
MARCH 13, 1899.**

	BONDS.	CASH AND COUPONS.	TOTAL.
Intercepting Sewer.	\$ 95,500 00	\$ 8,995 68	\$104,495 68
Extension of Rogers Fort Hill Park.	24,000 00	6,711 77	30,711 77
City Hall and Memorial Building.	87,000 00	6,000 29	93,000 29
High School.	25,710 29	1,561 06	27,271 35
Water Loan.	199,500 00	9,426 90	208,926 90
High Service.	37,500 00	4,317 05	41,817 05
New School Houses.	3,000 00	4,888 40	7,888,40
Totals.	\$472,210 29 41,901 15	\$41,901 15	\$514,111 44
	\$514,111 44		

SUPPLEMENTARY STATEMENT OF THE SEVERAL FUNDS.

	Present valuation not including appropriation for 1899.	Annual appropriation.	Maturity.	Amount of Bonds payable at maturity.
Intercepting Sewer...	\$104,495 68	\$5,000 00	Oct. 2, 1902	\$56,000 00
Extension of Rogers Fort Hill Park.....	30,711 77	6,000 00	Apr. 2, 1903	94,000 00
			Feb. 19, 1904	70,210 29
City Hall and Memorial Building.....	93,000 29	7,500 00	Oct. 1, 1920	450,000 00
High School.....	27,271 35	3,000 00	Apr. 1, 1921	150,000 00
Water Loan.....	208 926 90	16,000 00	Nov. 1, 1920	1,000,000 00
High Service.....	41,817 05	1,800 00	Nov. 1, 1911	75,000 00
New School Houses...	7,888 40	4,000 00	July 1, 1926	200,000 00

INDEX.

Abatement of Taxes.....	15
Account of the City Treasurer and Collector of Taxes for the year 1898.....	285
Assessors' Department.....	16
Auditor's Department.....	19
Auditor's Report.....	5
Carney Medal Fund.....	25
Care of City Hall.....	21
City Cemeteries.....	26
City Clerk.....	29
City Debt.....	33
City Messenger.....	35
City Sealer.....	37
City Treasurer....	38
City Weigher and Measurer.....	42
Commons.....	43
Corporation Tax.....	234
Corporation Tax Fund.....	49
Cost of Sewers Laid in 1898.....	282
County Tax	236
Debts Due the City.....	276
Due from the City on Water Loan.....	244
Due from the City on Ordinary City Debt.....	245
Elections	50
Engineering	55
Fire Department.....	59

General Treasury Fund—Loans.....	250
General Treasury Fund (Ordinary).....	251
General Treasury Fund—Taxes.....	249
Grade Crossings.....	68
Health.....	69
Heating City Hall and Memorial Building.....	76
Huntington Hall.....	78
Huntington Hall Rebuilding.....	80
Incidentals.....	81
Inspector of Animals, Provisions, etc.....	88
Inspector of Milk, Vinegar, etc.....	89
Insurance.....	92
Interest.....	93
Law Department.....	95
Library.....	99
Lighting.....	103
Liquor Licenses.....	106
Lowell and Tyngsboro Highway.....	107
Lowell Textile School.....	108
Mayor's Department.....	109
Memorandum of Receipts on Account of Sewer Assessments.....	253
Memorandum of Receipts on Account of Sidewalk Assessments.....	265
Military Aid Department.....	112
National Bank Tax.....	235
Observance of Labor Day.....	114
Paupers, Almshouse.....	115
Paupers, Out Door Relief.....	123
Police.....	135
Public Buildings.....	142
Real and Personal Property Owned by the City.....	280
Real Estate Owned by the City.....	277
Refunded License Fees.....	150
Report of Accountant.....	301
Report of the Commissioners of Sinking Funds for the year 1898.....	292
Rifle Range.....	148
Schools.....	151
School House Department.....	166
New School Houses.....	113
Bartlett School House.....	172

Carter Street School House.....	173
Addition to Plain Street School House.	176
Addition to Varnum School House.....	177
Moody Street School House.....	174
Sewer Maintenance.....	180
Sewer Construction.....	184
Sinking Funds.....	240
Soldiers' Relief.....	209
Soldiers and Sailors Memorial Tablets	213
State Aid, War With Spain.....	217
State Aid Department.....	214
State Aid Department (Office Expenses).....	215
Statement of the City Treasurer Relating to Special Funds for Care of Public Burying Grounds.....	290
State Tax.....	236
Street Department.....	187
Bicycle Path, Bridge Street.....	197
Extension of Aiken Street.....	193
Extension of Aiken Street to Merrimack Street.....	200
Extension of Beech Street.....	201
Extension of Lundberg Street.....	202
Paving Aiken Street.....	203
Paving Chelmsford Street.....	204
Paving Gorham Street.....	205
Paving Westford Street.....	206
Widening Andover Street.....	207
Summary Statement of the Condition of the Several Sinking Funds, March 13, 1899.....	306
Supplementary Statement of the Several Sinking Funds...	307
Taxes	237
Temporary Loans.....	239
Supply Department.....	219
Watering Streets.....	222
Water Works Department.....	224

TWENTY-SIXTH
ANNUAL REPORT
OF THE
LOWELL WATER BOARD
TO THE
CITY COUNCIL OF THE CITY OF LOWELL, MASS.,
AND THE
REPORTS OF THE SUPERINTENDENT OF WATER WORKS AND OF THE
CITY ENGINEER TO THE WATER BOARD FOR 1898.



LOWELL, MASS.:
LOWELL SUN PRINT: SUN BUILDING.
1899.

WATER DEPARTMENT, 1898.

WATER BOARD.

FRANK L. WEAVER, President.

Term expires second Monday in March, 1900.

STEPHEN H. JONES,

Term expires second Monday in March, 1899.

MICHAEL J. DOWD,

Term expires second Monday in March, 1901.

AUGUST FELS,

Term expires second Monday in March, 1902.

J. W. CRAWFORD, Secretary and Clerk.

ROBERT J. THOMAS, Superintendent.

GEORGE BOWERS, City Engineer.

D. B. H. BARTLETT, Engineer,

WILLIAM JOYCE, Asst. Foreman.

THOMAS McLOUGHLIN, Engineer.

JOHN E. LOWNY, Meters.

FRANK LAPOINT, Reservoir.

ARTEMAS S. YOUNG, Foreman Shop.

THOMAS F. DOYLE, Foreman.

A. F. COGER, Hydrants and Gates.

THOMAS ROGERS, Services.

OFFICE.

LEONARD T. FARRIS, Service Clerk.

GERTRUDE W. BYAM, Bookkeeper.

JULIA J. RAFTER, Asst. Bookkeeper.

INSPECTORS.

ROBERT GARDNER, JR.

MICHAEL H. McCUE.

GEORGE E. WORTHEN.

GEORGE F. TILTON.

WALTER P. WILEY.

REPORT OF THE WATER BOARD.

OFFICE OF THE WATER BOARD,
CITY HALL,

LOWELL, MASS., Jan. 23, 1899.

*To His Honor the Mayor and City Council of
the City of Lowell.*

Complying with the requirments of the City Ordinances, herewith is presented the twenty-sixth annual report of the Water Board for the year ending December 31st, 1898, together with the Superintendent's and City Engineer's reports of the operations and improvements made in the department during the year.

There has been no change in the membership, as Mr. Fels was re-elected for another term in the Board. But Mr. Charles E. Howe, who was elected a member of the Water Board in 1896 from the Board of Alderman, ceased to take part in the deliberations of this Board after

the City Solicitor had rendered a decision to the President that under the terms of the Amended Charter a member of the Board of Aldermen is not eligible to hold a place in the Water Board.

The only new work of any magnitude has been the laying of 24-inch pipe through the Gallery and the grading and fencing of the land purchased on the line of the Conduit; the work of laying the pipe through the Gallery cost \$2,977.53 and the pipe, purchased last year, cost \$2,372.44, making a total of \$5,349.97 for this improvement. The amount expended for grading and fencing was \$5,335.08 and the City land in Pawtucketville under the jurisdiction of the Water Department is now well defined and protected from encroachment, which will prevent a repetition of the state of affairs on the extension of Third Avenue over the Conduit near Mammoth Street and which it is proposed to lay out as an accepted Street, where it is found that three houses are encroaching upon the City's land from three to five feet and the yard fenced in takes in from twelve to fifteen feet. It has been proposed to re-adjust the lines of the street so as to bring the outside limit ten feet nearer the Conduit on one side and ten feet further away on the other side, but this Board objects to this device for settling the case; the houses should be removed from within the limits of the Conduit line. After all the effort

and expense expended by the Board in removing houses and preventing the erection of buildings on or near the Conduit, to protect the water from pollution, we will not give our consent to an exception to the rule on this most dangerous part of the Conduit.

After the work of widening Andover Street had progressed for a time, the Water Board was advised that the water pipe for about 2400 feet would be in the middle of the street, under the car tracks, and we were requested to move it to one side; but as no provision was made to reimburse the Department for this expense, the pipe was allowed to remain in the middle of the street; but a number of hydrants had to be removed at considerable expense.

On January 25th an order was adopted by the City Council for a Committee to confer with the Water Board as follows:

CITY OF LOWELL.

IN BOARD OF ALDERMEN.

Order providing for the appointment of a Joint Special Committee to confer with the Water Department.

Ordered, if the Common Council concur, That a Joint Special Committee be appointed, consist-

ing of two members of the Board of Aldermen, to be appointed by the Mayor, and three members of the Common Council, to be appointed by the President of the Common Council, to investigate the acts, doings and transactions of the Water Board, including the past transactions and business of said Board, for such period of time as said Committee may deem expedient; to consider also the present needs and requirements of the Water Department, and the business to be transacted therein during the current year, so far as the same can now be anticipated, with a view to ascertaining, what, if any, changes are required in the Ordinances relating to said Department or in the methods in which the business is conducted, to secure a more economical and efficient administration of the affairs of said Department.

Said Committee is hereby invested with full authority to examine all books, papers, records and accounts of said Department; to hold public hearings, if it shall deem it expedient to do so; to summons witnesses to appear before said Committee and give evidence relating to any matter pertinent to such investigation; to employ a stenographer and such clerical assistance as it may deem necessary and proper in the premises; and to report to the City Council its doings and findings in the premises, and such recommendations as said Committee may deem proper.

The expenses, not to exceed \$100, incurred by said Committee in carrying out this order, shall be charged to the appropriation for incidental expenses of the City Council.

Adopted January 25, 1898; approved January 27, 1898.

Attest:

GIRARD P. DADMAN,
City Clerk.

Committee:—Aldermen Dimon and Tuttle, Councilmen Murkland, Leighton and Roark.

The Committee met with the Water Board on March 24th. Aldermen Dimon and Tuttle and Councilman Roark, and on April 7th the Committee made the following report to the City Council:

LOWELL, MASS, April 7, 1898.

*To the Mayor and Honorable Board of Aldermen
and Common Council of the City of Lowell:*

GENTLEMEN,—Your Committee, appointed by His Honor the Mayor and the President of the Common Council to carry out the provisions of a

joint order, duly passed by both your honorable boards, entitled "An order to confer with the Water Board," etc., a copy of which is hereby annexed, would respectfully report:

That they have made a preliminary examination under this order and are satisfied that the subject (involving, as it does, questions of such grave and vital importance to the citizens of Lowell in relation to the best and most economical method of obtaining a pure water supply, and requiring opinions as to the management for a long term of years, also requesting suggestions so as "to require a more efficient and economical administration of the affairs of the Water Board") requires more time and attention than your Committee, temporarily appointed, can be reasonably expected to give, with the limited time at their disposal and small amount appropriated for this research, and would respectfully ask to be discharged from further duty.

Your Committee are of the opinion that, in justice to all concerned, they should report that as far as they have investigated there does not seem the slightest occasion to doubt that the administration of the Water Department is conducted honestly and conscientiously, as the members deem for the best interests of the City. There is a grave doubt in the minds of the Committee as to the advisability of so much power (as the ordinances seems to give them), to act

independently of the City Council in the expenditures of receipts from the Department, and without any provision for a yearly examination and official endorsement of their acts.

(Signed.)

CHARLES A. R. DIMON, Chairman.
FREDERICK A. TUTTLE,
WALTER E. MURKLAND,
WALTER F. LEIGHTON,
JOHN J. ROARK.

On June 21, Mr. Leonard T. Farris, a Clerk in the Water Office since 1873 resigned his position on account of failing health and it was with regret that the members felt called upon to accept it. Mr. Farris has been a familiar figure in the Water Office for twenty-five years, from the very beginning, and his absence will be greatly missed by his associates and the public generally. Mr. George E. Worthen, inspector for a number of years and formerly employed in the office, was elected to fill the place, and Mr. Samuel D. Butterworth was elected an Inspector to fill the place made vacant by the transferring of Mr. Worthen.

Continuing our efforts to preserve the purity of the water in the conduit, we purchased of Edward T. Genest a strip of land ten feet wide near Gershon Avenue and Moody Street on which is a barn which is to be removed.

The Secretary's report of the finances of the Department show a reduction in the amount expended from the previous year of \$17,029.68, but the receipts also fall off \$17,312.17 and our balance decreased \$3,177.70. It is fair to say, however, that an extensive job of pipe laying, including hydrants and gates for fire purposes for the Stirling, Faulkner and Belvidere No. 2 Mills, and amounting to over \$3,000.00 and be paid by these mills, will cover the deficiency.

The Committee on Appropriations for 1898 refused to make provision for an appropriation for this Department for care of fire hydrants as in previous years, amounting to \$11,977.20 and about \$400.00 for street fountains; these amounts, if received, would have shown a good excess over expenditures.

At the time the committee was appointed to confer with the Board, it was stated publicly that 1897 was the first time in twenty-one years that there had been a deficit and appeared to be the chief reason for the appointment of the committee. As a matter of fact, there has been a deficit thirteen times from 1876 to 1896. The year 1886 was the first time in which there was a clear excess of receipts over expenditures, including interest, and since then there have been four times that the expenditures exceeded the receipts as follows:

EXCESS AND DEFICIT.

1886—Excess,	\$ 1,414.01.	
1887—Excess,	1,328.24.	
1888—Deficit,	140.36.	Reduced price for hydrants,
	\$6,000.00.	
1889—Deficit,	4,287.82.	
1890—Deficit,	144.52.	
1891—Excess,	25,785.86.	Interest charges reduced,
	\$60,000.00.	
1892—Excess,	2,452.89.	Water rates reduced 10 per cent,—
	\$16,764.00.	
1893—Deficit,	7,738.70.	
1894—Excess,	7,564.24.	Reduced meter rates.
1895—Excess,	1,974.67.	
1896—Excess,	5,393.40.	Increase of new meters.
1897—Deficit,	2,895.21.	
1898—Deficit,	3,176.70.	No pay for hydrants.

It will be seen by this table that every time the income has equalled the expenditures, a reduction of rates has followed.

The increase in new meters in the last three years is responsible for a great deal of the decrease in charges for water, as over nine hundred new meters were set in excess of the new services; consequently that number of "rate payers"

were changed to meter rates, which means less for them to pay and a corresponding loss of income to the city. For 1888 the amount paid for care of hydrants was \$9,336.00, and it has increased with the addition of new ones each year to \$11,977.20 for 1898, therefore it will be readily seen that in every year since, excepting in 1891, the excess would have been a deficit without the hydrant money and the years showing a deficit would have been from \$9,000 to \$11,000 greater. Why should not property pay a tax to maintain the Water Works? The works are constructed with a view to the purpose of fire protection; the rates charged are based on a price for each fixture or by meter for amount used and do not comprehend the use for fire purposes. The charge for water in a cottage with a sink, bath tub, water closet and hose is \$16.00 per year, while a big ten-story store-house does not use a drop of water and pays nothing, although it requires four big hydrants to be set near by for protection. With the present rates for water and the rapid changing from faucet rates to meters each year, unless the Department has pay for the hydrants we shall be seriously crippled and it will be impossible to make the many extensions of water mains constantly being asked for.

The Secretary's tables show that charges for water decreased \$1,881.69. The total charges were:

For water	\$220,642 73
Other charges	14,091 84
Uncollected from 1897	29,089 41
	<hr/>
	\$263,323 98
Collections	\$194,292 30
Discount	20,561 55
Abatements	4,587 61
Uncollected to 1899	44,382 52
	<hr/>
	\$263,823 98
Balance January 1, 1898	\$ 33,384 45
Receipts	194,291 30
	<hr/>
	\$227,675 75
Expended 1898	\$197,469 00
Balance January 1, 1899	30,206 75
	<hr/>
	\$227,675 75

The details of the work done by the Department during the year will be found in the very complete report of Superintendent Thomas, and the details of duty and cost are contained in the Engineer's tables.

FRANK L. WEAVER,
AUGUST FELS,
MICHAEL J. DOWD,
STEPHEN H. JONES.

LOWELL WATER WORKS OFFICE,

January 1, 1899.

TO THE LOWELL WATER BOARD:

Gentlemen,--Herewith I submit figures detailing the finances of the Lowell Water Works for the year ending December 31st, 1898,

J. W. CRAWFORD,

Clerk.

TABLE I. FINANCIAL STATEMENT—LOWELL WATER WORKS, 1898.

CHARGES										RECEIPTS			
Water										By Accounts			
Rate	Metered	Total	Other than Water	Total Charges 1898	Total Charges 1897	Receipts	Discounts	Abs'tments	Due				
Transfer.....	.....	.....	.....	\$29,089 41	\$28,696 28	\$24,951 52	\$2,587 18	\$292 97	\$1,237 74				
January.....	\$ 219 01	\$ 221 11	\$1,150 85	1,371 96	990 04	1,359 68	6 78	4 25	1 25				
February.....	11 82	11 82	1,070 35	1,082 17	1,747 81	1,027 05	1 79	6 49	46 84				
March.....	92,735 52	25,743 71	.....	118,589 23	112,344 86	91,293 58	10,448 66	3,415 62	13,491 37				
April.....	1,581 72	1,581 72	1,848 33	3,430 05	18,156 03	2,849 27	149 94	272 74	158 10				
May.....	1,237 22	1,237 22	1,341 94	3,579 16	3,680 41	2,208 03	119 36	110 14	141 63				
June.....	1,945 81	39,836 91	1,701 08	41,537 99	36,988 61	36,911 68	3,945 23	173 68	507 40				
July.....	98 06	107 16	1,855 57	1,942 73	3,688 60	1,611 17	13 64	10 48	307 44				
August.....	615 50	636 28	982 27	1,608 55	1,858 81	1,310 16	56 15	90 17	152 07				
September.....	370 62	31,530 39	1,007 20	32,539 59	30,669 03	28,619 00	3,114 85	154 54	639 20				
October.....	343 46	20 33	880 81	1,244 60	1,793 41	805 59	24 26	42 59	372 16				
November.....	160 20	9 38	1,082 50	1,252 08	1,122 78	482 70	3 79	13 94	751 65				
December.....	421 76	25,955 76	1,190 94	27 568 46	26,594 89	922 87	89 92	.....	26,555 67				
Totals.....	\$99,800 70	\$120,842 03	\$14,091 84	\$263,823 98	\$208,331 56	\$194,292 30	\$20,561 55	\$4,587 61	\$44,382 52				

TABLE II. FINANCIAL STATEMENT--LOWELL WATER WORKS, 1898.

OUTGO.

	Pay Rolls and salaries	Water Works supplies	Interest and principal	Refunds and Va- cancies	General Expense Account	Stable Depart- ment	Laying Pipe in Gallery	Grading and Fencing	Land	COAL				Totals	
										P. S. 1	P. S. 2	P. S. 3	P. S. 4	1898	1897
January...	\$4,820 46	\$380 37	\$80 00	\$63 16	\$68 19	\$33 68	.....	.....	\$4,853 15	.....	\$422 95	\$634 16	\$246 60	\$11,031 81	\$12,345 24
February...	3,337 63	953 89	7,972 50	10 00	229 59	214 24	.....	.....	.....	.....	.....	159 77	.....	12,879 62	13,792 85
March.....	3,515 24	2,361 09	480 00	5 15	187 07	75 57	.....	.....	.....	\$1,456 76	2,069 90	1,351 92	853 70	12,356 39	14,169 57
April.....	5,362 59	3,948 72	80 00	3 60	85 41	225 26	\$75 00	.....	.....	.....	.....	.....	.....	9,780 58	20,006 42
May.....	5,087 03	1,381 02	13,840 00	1,209 57	70 92	69 17	521 36	.....	.....	.....	2,400 77	956 42	.....	30,536 26	38,063 38
June.....	5,045 38	2,103 38	3,500 00	58 08	197 70	39 59	698 91	43 25	.....	.....	.....	.....	.....	11,686 29	16,785 70
July.....	6,466 10	1,546 51	10,360 00	88 37	130 99	44 49	5 37	805 87	.....	1,870 65	.....	.....	777 74	22,096 09	21,205 58
August.....	5,066 12	1,141 20	1,912 50	128 38	162 28	61 27	32 25	464 78	.....	1,934 07	.....	1,021 19	203 38	12,127 42	11,169 14
September	4,891 96	1,525 50	560 00	53 86	140 57	28 71	.....	409 47	.....	.....	.....	.....	.....	7,610 07	9,996 25
October...	6,815 06	4,324 43	4,420 00	19 82	84 45	142 86	.....	322 06	157 82	.....	.....	.....	.....	16,286 50	20,658 74
November	5,732 90	1,207 99	19,900 00	26 63	81 06	94 79	.....	.....	.....	1,295 62	485 82	.....	1,523 75	30,348 56	26,409 99
December.	6,273 16	1,000 22	12,380 00	115 20	181 25	179 58	.....	.....	.....	.....	.....	.....	.....	20,129 41	10,495 82
Totals.....	\$62,413 63	\$21,885 32	\$80,485 00	\$1,781 82	\$1,619 48	\$1,209 21	\$1,332 89	\$2,045 43	\$5,010 97	\$6,557 09	\$5,379 44	\$4,143 46	\$3,605 26	\$197,469 00	\$214,408 68

TABLE III. FINANCIAL STATEMENT--LOWELL WATER WORKS, 1893.

SUBDIVISION OF "OTHER THAN WATER CHARGES" FROM TABLE 1.

	Meters Sold	Expense Settling Meters	Meter Repairs	New Services	Relaid Services	Labor and Material	Line Charges	Shut-off Fees	Sewer Flushing	Interest	Totals	
											1898	1897
January...	\$659 50	72 60	31 72	\$13 20	\$15 00	\$326 07	\$32 76				\$1,150 85	\$911 34
February..	716 50	77 21	54 38	40 04	23 73	137 15	11 34	8 00	2 00		1,070 35	1,684 58
March.....												
April.....	968 70	113 62	48 53	332 29	204 91	151 60	10 68	10 00	8 00		1,818 33	2,786 04
May.....	663 70	91 76	19 50	199 78	134 92	152 32	69 96	6 00	4 00		1,341 94	1,915 96
June.....	936 00	143 69	3 75	155 07	107 03	222 28	37 26	2 00	4 00		1,701 08	1,420 16
July.....	1,117 50	157 80	10 00	72 25	112 30	256 44	29 28	72 00	8 00		1,835 57	2,492 35
August.....	422 50	64 18	6 50	113 10	100 34	210 42	49 23	12 00	4 00		982 27	1,586 10
September.	270 50	32 16		142 32	120 10	86 03	38 82	4 00	8 00	305 27	1,007 20	1,166 81
October...	251 00	36 03	21 05	46 80	105 86	382 07	30 00	4 00	4 00		880 81	1,548 39
November.	297 00	49 49		167 48	145 97	371 24	43 32		8 00		1,082 50	991 88
December.	261 50	32 27	14 90	354 32	101 37	409 70	8 88	8 00			1,190 94	607 25
Totals.....	\$6,584 40	\$870 81	\$210 33	\$1,636 65	\$1,171 53	\$2,775 32	\$361 53	\$426 00	\$50 00	\$305 27	\$14,091 84	\$17,110 86

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1898.

SUBDIVISION OF "PAY ROLL AND SALARIES" FROM TABLE II.

	Salaries President and superin- tendent	Office and Inspec- tors	New Meter Work	Meter Repairs	Exten- sion and Con- struction	Engin- eering	Pumping Stations				Main- ten- ance	Reser- voir	New Services	Relaid Services	Re- charged Sundry Persons	Totals	
							Station 1	Station 2	Station 3	Station 4						1898	1897
Salary...	\$183 33	\$834 25	\$84 25	\$193 50	\$568 44	\$169 00	\$405 65	\$525 95	\$397 50	\$269 50	\$1,070 19	\$57 54	\$5 25	\$52 11	\$4 00	\$4,820 46	\$5,701 13
January	183 34	667 40	4 50	267 94	76 70	94 25	243 97	376 86	344 25	254 75	762 74	46 04	.....	13 50	1 39	3,337 63	3,608 11
February	183 33	667 40	30 39	285 21	76 70	78 00	273 19	402 36	228 00	286 06	858 81	46 04	39 00	60 75	.....	3,515 24	3,746 23
March	183 33	834 25	220 75	107 50	384 04	97 50	481 65	529 95	20 00	433 50	1,569 56	56 55	223 66	20 35	18 00	5,362 59	4,906 81
April	183 34	667 40	73 50	119 25	377 34	79 13	203 74	451 61	282 94	206 34	2,040 70	46 04	194 32	161 38	.....	5,087 03	6,178 61
May	183 33	590 68	94 00	156 25	551 30	89 25	342 61	401 56	226 11	274 86	1,704 57	46 04	228 14	156 68	.....	5,045 38	7,338 57
June	183 33	834 25	181 50	155 25	175 33	151 50	572 17	428 29	85 01	465 26	2,678 86	57 55	193 69	225 05	79 06	6,466 10	5,994 54
July	183 34	667 40	68 50	102 75	575 67	71 50	449 72	374 61	15 75	346 25	1,822 10	46 04	159 22	171 72	11 55	5,066 12	5,124 56
August	183 33	667 40	44 06	48 25	158 15	78 00	449 72	389 86	14 00	397 25	2,206 46	46 04	169 39	100 55	29 50	4,891 96	5,089 26
September	183 34	834 25	37 00	37 50	1,320 72	100 75	557 15	199 45	455 74	419 50	1,732 19	57 55	58 55	173 68	587 70	6,815 06	5,705 93
October	183 34	667 40	20 17	42 78	1,278 08	78 00	536 72	458 47	56 08	355 58	1,171 13	46 04	97 41	134 93	606 77	5,732 90	4,871 61
November	133 33	834 25	77 75	45 25	960 95	97 50	627 90	540 20	119 52	450 75	1,703 17	56 55	113 22	127 61	334 21	6,273 16	4,712 45
December	\$2,200 00	\$8,766 33	\$936 37	\$1,561 43	\$6,563 42	\$1,184 38	\$5,144 19	\$5,079 17	\$2,244 90	\$4,069 60	\$19,380 48	\$610 02	\$1,481 85	\$1,579 31	\$1,672 18	\$62,413 63	\$62,977 81

TABLE V.

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1898.

SUBDIVISION "WATER WORKS SUPPLIES" FROM TABLE II.

Pumping Station, No. 1, supplies.....	\$ 852 85
Pumping Station, No. 2, supplies.....	1,049 14
Pumping Station, No. 3, supplies	1,294 81
Pumping Station, No. 4, supplies.....	421 03
Iron pipe and specials.....	3,615 22
Hydrants.....	1,233 64
Gates and valves.....	943 75
Service pipe.....	1,856 95
Pig lead.....	438 00
Meters.....	5,673 54
Sidewalk boxes.....	610 00
Machinery and tools.....	461 16
Stationery and printing.....	479 15
Miscellaneous stock.....	2,003 29
Brass castings.....	952 79
<hr/>	
Total.....	\$21,885 32

TABLE VI.

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1898.

DETAIL OF "PRINCIPAL AND INTEREST" FROM TABLE II.

WATER LOAN BONDS:

Coupon No. 11, May, 1896,	2, at 20....	\$	40 00
No. 12, Nov., 1896,	4, at 20 ...		80 00
No. 13, May, 1897,	6, at 20....		120 00
No. 14, Nov., 1897,	9, at 20....		180 00
No. 15, May, 1898, 987, at 20....			19,740 00
No. 16, Nov., 1898, 946, at 20....			18,920 00
			<hr/> \$39,080 00

HIGH SERVICE LOAN:

Coupon No. 33, May, 1898,	15, at 100....	\$1,500 00	
No. 34, Nov., 1898,	15, at 100....	1,500 00	
			<hr/> 3,000 00

NOTES:

Lowell Inst. for Savings, 6 mos., \$24,000.00	}	\$ 840 00	
6 mos., 18,000.00			
1 year, 35,000.00...		1,225 00	
1 year, 41,000.00...		1,640 00	
1 year, 50,000.00...		2,000 00	
			<hr/> 5,705 00

COMMONWEALTH OF MASS.:

1 year, \$65,000.00...	\$2,600 00	
		<hr/> 2,600 00
		<hr/> \$50,385 00

PRINCIPAL PAYMENTS:

Engine Loan...	\$ 6,000 00	
Driven Well Loans.....	10,000 00	
Driven Well Loans.....	4,100 00	
Driven Well Loans.....	5,000 00	
Driven Well Loans.....	5,000 00	
		<hr/> \$30,100 00
		<hr/> \$80,485 00

TABLE VII.

FINANCIAL STATEMENT—LOWELL WATER WORKS, 1898

MAINTENANCE AND CONSTRUCTION STATEMENT.

MAINTENANCE

PAID FOR LABOR:

Salary President and Superintendent	\$ 2,200 00
Office and Inspectors.....	8,766 33
Pumping Stations.....	16,537 86
Reservoir.. ..	610 02
Meter Work.....	2,497 80
General Maintenance.....	20,959 79

PAID FOR MATERIAL:

Output as per Stock Book.....	2,610 73
Interest.....	50,385 00
General Expense.....	1,619 48
Stable.....	1,209 21
Machinery and Tools.....	461 16
Pumping Station Supplies.....	3,617 83
Coal.....	19,685 25
Stationery and Printing.....	479 15

Total..... \$131,639 61

CONSTRUCTION.

PAID FOR LABOR:

Extension, Construction and New Services.....	\$ 9,169 65
---	-------------

PAID FOR MATERIAL.

Output as per Stock Book.....	10,063 75
Payment on Loans.....	30,100 00
Land.....	5,010 97
Pipe in Gallery.....	1,332 89
Grading and Fencing.....	2,045 43

Total..... \$57,722 69

Superintendent's Report.

LOWELL, MASS., Jan. 2, 1899.

To the Lowell Water Board:

Gentlemen,—Complying with the City Ordinances, I herewith present for your consideration the report of the Superintendent of Water Works for the year 1898.

All of the improvements and extensions voted for by Your Honorable Board during the year have been completed, excepting a short extension on Princeton Street, which was held back at the request of the owner of the house, who applied for the same.

Among the improvements made, probably the most important was the extension of the 24-inch Boulevard main through the Filter Gallery. This work, which was begun April 27th and finished June 15th, at a cost of \$5,335.08 (including pipe which was purchased in 1897), is chiefly valuable

because it enables the Department to discontinue the use of water from the Filter Gallery when not needed. It does not, however, involve the abandonment of the Gallery as a source of supply as some people claim, nor will it impair its efficiency or interfere with its use, when such use becomes necessary or desirable. That is to say, the pipe is so laid as not to come in contact with the filtering surface, or to contract the filtering area.

To describe: When the 24-inch main from the Boulevard Wells was first laid, it projected about three feet inside the westerly end of the gallery and four feet above the bottom. At this point the new pipe was connected and continued on a straight grade along the northerly side of the gallery 1320 feet to an opening in the Inlet Chamber wall, the bottom tread of which was nine inches above the bottom of the gallery. The final connection was made here by means of an iron casting specially designed for the purpose. The pipe rests on brick masonry piers built every ten feet on the old brace stones in the bottom of the gallery. About 3200 feet of copper wire, size 01, was used in securing the pipe on the piers to guard against their floating in case they became empty while the gallery was full. Twenty-four thousand bricks and sixty-five barrels of Portland Cement were used in the construction of the piers,

A 24 x 24 x 24-inch cast iron tee was set in the line opposite the Filter Basin with a view of connecting it independently of the gallery at some future time.

The weight of the pipe used on the extension was 200 lbs. per ft., or 2400 lbs. per 12 ft. lengths. All of it had to be lowered into the gallery through the bulkhead at the gate house, and from there floated to position ready for laying. This was made practicable by bolting to the open ends of each pipe tight-fitting wooden heads. After the pipe was all floated into place in order to lay the same and build the piers, continuous pumping had to be resorted to, to keep the water in the gallery sufficiently low. This was successfully accomplished by a 6-inch Centrifugal pump and an electric motor running night and day, pumping at the rate of 500,000 gallons per 24 hours. Both of these machines were bought for that purpose, and are now stored for future use. In addition to the opening in the Inlet Chamber wall used for the connection of this main, there is another of the same size. Both of these were originally used to accommodate the flow of water from the gallery, and were controlled by sluice gates set in the down stream side of the wall and operated from the floor of the gate chamber. Now one is utilized for the Well water and the other for the Gallery. A sluice gate, with a float at

tached, designed to work automatically, but which never did, was removed to allow for the connection of the 24-inch pipe.

On October 28th, four months after the work was completed, the water was drawn off, the gallery and the pipe, piers, etc., inspected, when everything was found in first rate condition. At the same time a careful examination of the Conduit and Tunnel was made. No deterioration was apparent as compared with the last examination and no more leaks were discovered than previously. Thinking it might be interesting to know the precise quantity of leakage into the Conduit, advantage was taken of the fact that the Gallery and Well water was shut off and the amount measured by catching the water in a pail where it discharged in the terminal chamber. The result obtained was 65 gallons per minute or 93,600 gallons per day. As the season about that time was very rainy and the ground consequently contained considerable moisture, the figures given are probably not far off the maximum yield.

GRADING AND FENCING LAND NEAR CONDUIT.

About four thousand three hundred and eighty-three cubic yards of earth filling were used in grading and filling the several lots of land over the Conduit, recently purchased, together with the

land surrounding the Inlet Chamber house as follows :

Land between Gershom and Gardner Ave.,	660 cu. yds.	
“ “ Moody St. and Sarah Ave.,	3,068	“
Bodwell Homestead lot,	100	“
Inlet Chamber lot,	555	“

On the northerly and easterly lines of the Bodwell Land 490 perch of stone were used in constructing a retaining wall. The stone for this wall and the sand used for filling were procured in the neighborhood without expense, save for hauling.

Fences were built on lines of the following lots: Bodwell Homestead lot, land between Gershom and Garden Avenues, land between Moody Street and Sarah Avenue, Filter Basin lot, land on Varnum Avenue opposite Inlet Chamber, west line of Boulevard land above Pumping Station No. 4; whole amount of fence built, 3,480 ft., of which all but 165 ft., were picket fence. Two coats of red paint were given all this new fence and also the old fence at the Inlet Chamber.

The total cost of fencing, grading, etc., the foregoing lots, including the bank wall on the Bodwell lot, together with rebuilding the old fence on the top line of the wall, was \$5,349.97.

Some little work yet remains to be done in top dressing the Bodwell lot, otherwise everything voted regarding these premises has been attended to.

Stone bounds were set during the year on the corners of all lots owned by the Department, not heretofore so bounded, the same involving, as it did, a new survey of such land.

Signs marked "Lowell Water Works" were also placed on the different pieces of land belonging to the Department.

EXTENSIONS, GATES, HYDRANTS, ETC.

Accompanying this report is a schedule containing the location and size of all extensions of main pipe laid, and number, size and location of all hydrants and gates set during the year. These figures show that 14,046 feet of cast iron pipe was laid, of which 712 feet was replacing smaller pipe in Rogers and Tremont Streets. Thus making a total, of in round numbers, of 124 miles now in use.

Forty-six new gates were set, making a total of 1,144 gates, and twelve additional public hydrants were added, making a total of 1,123 hydrants in use, not counting hydrants for private purposes.

The figures for pipe laid include pipe used for Fire Services as follows:

Tremont and Suffolk Store-House, Cabot Street.

Tremont and Suffolk Mills, Cabot Street.

Tremont and Suffolk Mills, Tremont Street.

Lowell Hosiery Mill Yard.

Belvidere Woolen Mills, No. 2, Lawrence Street.

Stirling Mills, Lawrence Street.

Faulkner's Mills, Lawrence Street.

Barker Manufacturing Co., Middle Street.

Varnum School, Sixth Street.

American Safety Tread Co., Perry Street.

The total length of pipe laid the past year was less than the previous year and should be still further reduced this year.

SERVICES.

Only 165 new services were laid during the year amounting to 6,534 feet of pipe against 350 the previous year or 12,330 feet of pipe. This is a remarkable falling off in service work, remarkable not alone in comparison with 1897 but because it is the smallest number of services laid in any one year since the construction of the Works.

NEW SERVICES.

23	5-8-inch Lead Pipe	.	.	697 feet
37	3-4-inch Lead Pipe	.	.	1,244 feet
4	1-inch Lead Pipe	.	.	128 feet
96	3-4-inch Iron Lead Lined	.	.	3,502 feet
2	1-inch Iron Lead Lined	.	.	244 feet
2	1 1-2-inch Iron Lead Lined	.	.	504 feet
1	2-inch Iron Lead Lined	.	.	215 feet
<hr/>				
165	Total laid in 1898.	.	.	6,534 feet

Amount previously laid	.	.	399,232 feet
Total now laid	.	.	405,766 feet
Total services laid	.	.	11,059 feet
Total cut off at main	.	.	708 feet
Total reconnected	.	.	45 feet
Total now in use	.	.	10,396 feet

SERVICES CHANGED.

No	Kind	Changed to									Total feet
		Lead 3-4-in.	Lead 5-8-in.	Lead 1-in.	Lead Lined 2-in.	Lead Lined 3-4-in.	Lead Lined 1-in.	Lead Lined 1 1-4- in.	Lead Lined 1 1-2- in.	Iron 1-in.	
43	3-4-in. iron	1328.1	..	..	..	..	..	..	..	..	1328.1
30	3-4-in. iron	..	956.4	..	..	..	..	..	..	..	956.4
2	3-4-in. iron	..	..	..	..	..	..	..	90.0	..	90.0
85	3-4-in. iron	..	..	..	..	5291.0	..	..	..	..	2591.0
2	3-4-in. iron	..	..	..	..	..	84.9	..	..	..	84.9
1	3-4-in. iron	..	..	..	..	..	..	..	..	61.0	61.0
4	3-4-in. iron	..	..	110.4	..	..	..	..	..	..	110.4
1	3-4-in. lead	..	..	..	..	..	44.0	..	..	..	44.0
5	1-in. iron	..	..	..	..	..	136.2	..	..	..	136.2
4	1-in. iron	..	150.1	..	..	..	..	..	..	..	150.1
1	1-in. iron	..	..	..	29.9	..	..	..	..	..	28.9
2	1-in. iron	..	..	39.9	..	..	..	..	..	..	39.9
12	1-in. iron	..	..	..	..	286.4	..	..	..	..	286.4
7	1-in. iron	365.5	..	..	..	..	..	..	..	..	365.5
1	1 1-4-in. iron	..	..	..	..	..	..	31.6	..	..	31.6
1	1 1-2-in. iron	..	..	..	..	..	20.0	..	..	..	20.0
1	1 1-2-in. iron	..	..	32.0	..	..	..	..	..	..	32.0
1	1 1-2-in. iron	..	..	..	59.3	..	..	..	..	..	59.3
1	1 1-2-in. iron	..	..	..	..	..	..	..	12.6	..	12.6
1	2-in. iron	..	..	..	15.0	..	..	..	..	..	15.0
205	Total	1693.6	1106.5	182.1	104.	2877.4	284.11	31.6	102.6	61.0	6443.3

METERS.

Four hundred and eighty-two (482) meters were added during the year, making a total of 4,866 now in use. This is only 47 per cent. of the total number of services, yet yields 54 per cent. of the earnings of the Department or \$108,757.83 against \$89,820.63 accruing from unmetered water. These figures speak for themselves and are especially significant when considered in connection with the greater quantity of water delivered to consumers who are charged schedule rates. In other words, if the total quantity of water consumed was paid for at the regular price for metered water, viz., 14 cents per 100 cubic feet, less 10 per cent. discount, the income of the Department for water would be \$412,368.65 instead of \$194,291.30, the actual receipts for the past year.

METERS RUNNING January 1, 1899.

Sizes	5-8 in.	3-4-in.	1-in.	¹ 1-2-in.	2-in.	3-in.	4-in.	6-in.	Total
Desper - - -	60	31	8	..	..	..	..	..	99
Crown - - -	1965	1488	264	11	14	2	5	2	3751
Worthington . -	207	28	52	64	32	7	3	..	393
Duplex - - -	7	10	7	..	..	..	..	..	24
Ball and Fitts - -	2	..	..	..	..	..	..	..	2
Fitts Rotary - -	1	..	..	..	..	..	..	..	1
Frost - - -	4	6	1	..	..	..	..	..	11
Thomson - - -	6	20	3	..	..	..	..	..	29
Gem - - -	..	..	..	..	5	..	2	1	8
Metropolitan - -	..	2	..	..	..	..	..	..	2
Trident - - -	66	19	1	..	..	..	..	..	86
Nash - - -	62	63	42	..	..	..	..	..	167
Lambert - - -	22	51	7	..	..	..	..	..	80
Niagara - - -	1	1	..	..	..	..	..	..	2
Hersey - - -	78	34	3	..	..	..	..	..	115
Empire - - -	50	25	1	..	..	..	..	..	76
Westinghouse - -	..	1	..	..	..	..	..	..	1
Columbia - - -	2	..	..	..	..	..	..	..	2
Union - - -	14	1	..	1	..	..	..	..	16
Total - - -	2547	1780	389	76	51	9	10	3	4865

PRIVATE METERS RUNNING January 1, 1899.

Size - - - . -	3-8-in.	5-8-in.	3-4-in.	1-in.	2-in.	Total.
Desper - - - - -	--	1	3	1	--	5
Worthington - - -	--	--	--	1	2	3
Crown - - - - -	1	29	22	2	--	54
Duplex - - - - -	--	1	--	--	--	1
Thomson - - - - -	--	--	1	--	--	1
Hersey - - - - -	--	2	--	--	--	2
Nash - - - - -	--	11	2	--	1	14
Frost - - - - -	--	2	1	--	--	3
Empire - - - - -	--	2	--	--	--	2
Trident - - - - -	--	1	--	--	--	1
Lambert - - - - -	--	2	--	--	--	2
Total.	1	51	29	4	3	88

New meters - - - - -	484
Meters condemned - - - - -	39
Meters cleaned and repaired - - - - -	580
Meters frozen and burst - - - - -	57
Meters discontinued - - - - -	6
Meters set for private use - - - - -	7
New meters set in place of old ones condemned - - - - -	43

MAINTENANCE.

While the construction work of the Department is liable to decrease, as can be seen by the number of extensions and services laid last year, as compared with previous years, the ordinary maintenance work of a plant like the Lowell Water Works must naturally increase year by year. When the old valve boxes decay and become dangerous to public travel, they have to be renewed. Iron service pipes in time yield to corrosion, rendering them unfit for use and they have to be replaced with new. Occasionally from wear and tear valves and hydrants break down. Cast iron mains also deteriorate after the lapse of years and with an increase in the population to be supplied, they frequently have to give place to larger mains; every increase in the territory to be piped for distributing water adds to the cost of operation and maintenance. Another cause of expense is the work necessary for preserving the purity of the water and guarding against its pollution. In this direction the utmost vigilance is at all times imperative to see that no opportunity is allowed for the contamination of water in the wells, the mains or the reservoirs; the wells should be cleaned every year and the mains blown out regularly.

Progress in the manufacture of pumping machinery and other mechanical appliances compel, in

the interest of economy, the substitution of new machinery and new tools. Of course, experience and study have developed new ideas in the Water Works construction tending to greater durability in the materials used, which thereby will undoubtedly have the effect of lessening the outlay for maintenance. Iron valve boxes are now used instead of wooden boxes, lead or lead-lined iron pipes have taken the place of plain iron pipes. Flush hydrants, with their necessary wooden boxes, have given way to post hydrants, and when street mains are now laid the probable future needs of the district to be supplied is anticipated and larger pipes as a rule are used. But probably the greatest strides in the line of economy have been made in pumping machinery.

PUMPING STATIONS AND PUMPING.

The controlling idea in the management and conduct of the different pumping plants of this Department during the year was to so regulate their operation as to give the consumers the least possible reason for complaint regarding the quality of the water, at the same time devising ways and means to reduce the cost of pumping to the lowest possible point without neglecting any needed repairs or reasonable improvements.

At Pumping Station No 1, the High Duty Worthington Pump ran 282 days, pumping

988,451,625 gallons; the Low Duty Worthington ran 39 days, pumping 131,679,940 gallons; the old Morris Engine was not called upon for any service during the year. So much for the Low Service. The High Service Pump ran 273 days and pumped 40,084,506 gallons.

The High Duty Worthington, which the foregoing figures show, did nearly all the pumping, for the low service was a little off in its work for a time, owing to the leakage of air by the piston of the accumulator. Taking it apart an examination found one of the packing rings on the piston broken; this was replaced by a new one and an additional ring was also fitted to the piston, making four instead of three, as originally. Since these repairs were made the working of the pump has been satisfactory. While the Low Duty Worthington was running, one of the 4-inch pump valve seats came out of place; this was caused by the lead which formed a joint around it becoming loose. It was fixed temporarily at the time of its occurrence with cold lead, and later a new lead joint was run around it and set up carefully. Other minor repairs were made on the High Service pump, the feed and air pumps. The feed pumps were also removed from the basement of the engine room to the boiler room where they will be more directly under the eye of the firemen. A new iron ladder, 23 feet long, was placed,

extending from the floor of the engine room to the bottom of the main pump well, the old wooden ladder formerly used having become unsafe.

Total quantity of water pumped

at this station 1,120,131,565 galls.

Total cost of pumping per million gallons, \$ 8 18

Total cost of pumping per million galls. H. S. 11 75

At Pumping Station No. 2 a full new set of piston heads were made at the Department Shop for the water ends of the Dean Pumps; also a new set of sleeves were purchased of the Dean Steam Pump Company for the same pumps. Only one of the pumps, however, was furnished with these heads and sleeves; the other must wait until a more favorable time for shutting down.

Total quantity of water pumped

at this station, 816,455,736

Total cost of pumping per million gallons, \$14 11

At Pumping Station No. 3 the buildings and machinery are in about the same general condition they were a year ago. Very little repairs were made, in fact, it would be doubtful wisdom to contract any expense in that direction at this station; for, although the equipment is quite inferior, the prospects now are that it will only run occasionally, and then only in an emergency. The

Wells on Section C, fifty in number, were thoroughly cleaned by scraping, tripping and pumping each individual well.

An effort was made to shorten the suction for the condenser pump by excavating a trench from the brook to within a hundred feet of the station. It was partially completed when the water became too high for the workmen. Work will be resumed on it again when the brook is low enough. Wooden shutters are made for the windows of this station with bolts to fasten them on the inside when the Station is not in use. The past year it was shut down and closed 171 days. In order that its use might be still further discontinued, experiments were made to ascertain the practicability of drafting water from the wells at this plant with the pumps at No. 2 station, a distance of 5,300 feet. For this purpose a 12-inch connection with a 12-inch gate was made between the 20-inch force main from No. 3 station and the suction pipe at No. 2 station. The result was successful to the extent that with the 12-inch connection opened the vacuum gauge on the suction pipe at No. 3 showed a vacuum of from 7 to 10 inches, while the pumpage at No. 2 was increased at the rate of 500,000 gallons every twenty-four hours. At a time, too, when the water in the wells was comparatively low. A week's run was made with this connection open, but after the first

day considerable air began to manifest itself, at first only slightly interfering with the working of the pump but gradually growing worse until it was finally necessary to close the connection. This difficulty with air was attributed to the fact that the water, in its way from the wells to the pumps passed a roundabout and tortuous course through the suction pipe and pumps at Station No. 3 before it entered the long line of 20-inch pipe, thus increasing the possibility of air-leaks, not to mention the friction caused thereby.

To obviate these conditions, it was thought best to make a direct connection between the top of the receiver and the force main and acting under your authority a 20-inch connection with a 20-inch gate was accordingly made. Since this change the pumps at No. 2 Station have been able, from pumping 2,750,000 gallons per day with 27 inches of vacuum, to pump 4,000,000 gallons with 2 inches less vacuum and against greater head pump 5 gallons more of water per lb. of coal. That the success of this experiment is of great value to the Department can be appreciated when the saving in salaries is considered that would be paid for the operation of No. 3 station perpetually. It is also a benefit inasmuch as it provides for the constant use of the wells which would undoubtedly suffer if they were allowed to stand idle for a great length of time; and

another item worth considering is the fact that the ground water around the station will now be kept lower, thereby saving the interior of the station from damage and the boilers and pumps from injury caused when the water is high.

Total quantity of water pumped at this station 515,625,542 gallons.

Total cost per million gallons, \$12.20.

The condition of affairs at No. 4 Pumping Station has been greatly improved during the year. A new coal bin of 200 tons capacity was erected at the westerly end of the boiler room. This was much needed as the old bin when full could accommodate but a week's supply of coal. The grounds about the buildings were cleaned of rubbish, graded and sown with grass seed. Several trees and bushes were planted in front of the Station, and seats and bicycle racks were arranged at the easterly end of the Station for the convenience and use of bicycle riders who stop there for drinking water on their way up and down the Boulevard, and a long bar made of 2-inch pipe was set up for hitching horses.

The road approaching the Station from the Boulevard was widened and graded and the slopes sodded. The exterior of the building was newly painted, all of which has the effect of giving the place a neat and attractive appearance, making it,

without doubt, the most popular spot on the Boulevard.

Quantity of water pumped at this Station, 1,055,450,387 gallons.

Cost of pumping per million gallons, \$6.88.

The total quantity of water pumped at all Stations during the year was 3,517,663,230 gallons. Deducting from these figures the quantity pumped at Station No. 4, which has to be repumped at No. 1 Station, namely 1,065,450,387 gallons, and we get what was pumped into the reservoir or into the distributing pipes for consumption, 2,452,212,843 gallons. This is somewhat in excess of last year.

Compared with 1897, the cost of pumping shows a material reduction, viz.: \$13.99 vs. \$16.68. This lowering of the cost of pumping is due in a great measure to the closing of No. 3 Station for a considerable part of the year, and might have been still lower but for expense attending the improvements made at the various Stations, particularly at No. 4 Station, where an unusual amount of labor was performed.

All of the Stations have a large stock of coal, probably sufficient to last until April.

Cost of Pumping based on Pumping Station expenses, \$13.99.

Cost of Pumping based on Maintenance expenses,
\$33.14.

Cost of Pumping based on Maintenance and Interest, \$53.68.

Cost of Pumping based on Total expenditures,
\$80.52.

CONSUMPTION.

The quantity of water used and wasted for the year 1898 was 2,454,575,265 gallons; this is 47,332,251 gallons in excess of 1897.

The average daily consumption was 6,724,865, making a daily per capita consumption of 78 gallons.

MISCELLANEOUS.

Pursuant to the vote of Your Honorable Board, the Drinking Fountain located at the entrance to Fort Hill Park was removed and placed at the junction of Gorham and Carlisle Streets.

Fifteen tons of hay were cut from the Reservoir lot and land on the Boulevard beyond the Pumping Station. Several small leaks were reported and repaired during the year, but none of a serious nature.

Owing to the widening of Andover Street, all of the hydrants on the street east of Nesmith Street had to be relocated, and as those in use there were old style and badly worn, they were replaced by new Ludlow Post Hydrants. The ser-

vice and gate boxes on the south side of the street were also moved; most of them requiring renewal.

CONCLUSION.

In concluding, I take this opportunity of expressing my appreciation of the cordial support given me by President Weaver and the members of the Board during the year, and to acknowledge the efficient co-operation of Secretary Crawford. I also desire to bear testimony to the valuable aid rendered to the Department by W. F. Sullivan of the City Engineer's Office.

Respectfully submitted,

ROBERT J. THOMAS,

Superintendent.

LOW SERVICE.—WATER PIPES LAID IN 1898.

STREETS.	BETWEEN WHAT STREETS.	Length in feet.					Total.
		4-in.	6-in.	8-in.	10-in.	12-in.	
Aiken	Between Hall and Perkins ...			337			337.0
Andover	Service to Locks and Canals Bld'g	18					18.0
Andover	Easterly to Town Line.....		418				418.0
Ayer Ave	Easterly to Quebec st..		205				205.0
Barnaby	Extended northerly.....		48				48.0
Belrose Ave ..	Between Hanks st. and Waverly av		390				390.0
Burgess.....	Easterly to School st.....		215½				215.5
Cabot	On fire service to T & S storehouse		16½				16.5
Cabot	On corp. connection opp. Gore st					11	11 0
Chelmsford ..	Extended southerly to Stevens st			436			436.0
Chestnut.....	Nesmith and Park sts.....		398				398.0
Coburn Ave..	Westerly to Stevens.....		212				212.0
Crowley.....	Extended southerly.....		63				63.0
Dane	Westerly to Fletcher st.....		208½				208.5
Fernald	Extended southerly.....		3				3.0
Fourth Ave..	Easterly to Moody st.....			261			261.0
Grove	Easterly to Loring st		168				168.0
Hanks.....	Southerly to Rogers st.....		18				18.0
Hanks.....	Rogers and Belrose ave.....		377				378.0
Hawthorne ...	Extended southerly.....		52				52.0
Lawrence.....	Sherman st and Belvidere mill No. 2 (Private).....			208			208.0
Leyden	Southerly from Andover st.....		66				66.0
Liberty	Between Warwick and Pine sts...		136½				136.5
Livingston Av	Extended southerly.....		345				345.0
Lowell H'siery	Fire service in yard (Private)....		137½				137.0
Magnolia	Southerly from Varnum ave.....		350				350.0
Middle	Fire service to H R Barker M'f'g Co		37½				37.5
Newell	Extended easterly.....		170				170.0
Norwood.....	Southerly from Midland st.....		189				189.0
	Carried forward.....	18	4224	1242		11	5495.5

LOW SERVICE.—WATER PIPES LAID IN 1898.—*Continued.*

STREETS.	BETWEEN WHAT STREETS.	Length in feet.					Total.
		4-in.	6-in.	8-in.	10-in.	12-in.	
	Brought forward.....	18	4224	1242		11	5495.5
Parker	Westerly to Plain st		284				284.0
Penn Ave.....	Southerly to Ayer ave.....		378				378.0
Pentucket....	Southerly from Andover st.....		42½				42.5
Perkins	Aeross Aiken st.....				53		53.0
Perry	Southerly to Sherman st.....			5·3			583.0
Perry	Fire service to Am. Safety Tread Co		14				14.0
Plain	Easterly to Penn ave		255				255.0
Quebec	Southerly to Ayer ave.....		93				93.0
Queen.....	Southerly to Westford st		140				140.0
Rogers	High and Nesmith.....				1419		1419.0
Sanders Ave..	Extended southerly.....		48				48.0
Sherman	Fire service to Sterling and Faulkner's (Private).....		243	541	815		1599.0
Sixth.....	Fire service to Varnum school....	58½					58.5
Starbird... .	Extended northerly....		48				48.0
Stevens	Extended to Chelmsford st			356			356.0
Stevens	Extended southerly from Jenness			522½			522.5
Tremont	From 20-inch pipe s'ly to T & S storehouse.....					266	266.0
Tremont .. .	Corp. connection to T & S mill....					7	7.0
Waterford ...	Extended easterly.....		234				234.0
Waverly Ave..	Rogers and Belrose ave.....		423				423.0
Westford	Westerly to terminus near Pine st			816			816.0
Westford	Westerly from Pine st..			179			179.0
Hydrants .....	.....		167½	16½			184.0
	Laid in 1898.....	76½	6594	4256	2287	284	13497.5
	Less taken out Rogers and Tremont sts.....						712.0
	Total						12,785.5

HIGH SERVICE—WATER PIPES LAID IN 1898.

STREETS.	BETWEEN WHAT STREETS.	Length in feet.					Total.
		4-in.	6 in.	8-in.	10-in.	12-in.	
Belmont Av...	Mansur and Wyman sts.....		228				228.0
Wentworth Av	Extended northerly....		371				371.0
Wyman	Westerly from Belmont ave		8				8.0
Wyman	Fire service to B F Butler's stable	197					197.0
	Laid in 1898.....	197	607				804.0
	High service laid previous to 1898						35,513.0
	Total high service to Jan. 1, 1899						36,317.0

Brought forward..... 12,785.5 feet

Low service laid previous to 1898..... 610,497.8 "

Total low service to January 1, 1899..... 623,283.3 "

Total high service to January 1, 1899..... 36,317.0 "

Total high and low service to January 1, 1899..... 659,600.3 "

Total in miles, 124.922.

LOW SERVICE—LIST OF STOP GATES SET DURING 1898.

STREETS.	LOCATION.	4 in.	6 in.	8 in.	10 in.	12 in.	20 in.
Aiken	13.7 feet south of north line Aiken street, on east line Hall street.....			1			
Andover	On service to L. & C.'s premises, 52 feet west of west line of A. E. Rose's, 38.8 feet north of south line Andover street (under track).....	1					
Andover	On service to L. & C.'s premises, 17 feet south of north line of Andover street, 11 feet east of west line D. W. C. Farrington's.....	1					
Andover.....	20 feet south of north line Andover street, 37.6 feet east of east line Wenworth ave.....		1				
Belvidere Woolen Mill, No. 2.....	20.6 feet north of mill, 5 feet west of west line Lawrence street. (Private).....			1			
Bridge	15 feet west of east line Bridge street, 17.9 feet north of north line Merrimack square. (Changed old gate).....			1			
Burgess.....	12 feet south of north line Burgess street, 13.7 feet east of west line School street.....		1				
Cabot	Fire service to Tremont and Suffolk storehouse, 12.3 feet south of north line Cabot street, 60.6 feet east of east line Cheever street.....		1				
Cabot	Corporation connection to L. & C.'s pipe, 16.9 feet east of west line Cabot street, 107 feet south of north line T. and S. storehouse					1	
Chelmsford.....	16.8 feet east of west line Chelmsford street, 5.3 feet north of south line driveway to City Farm.....		1				
Chestnut.....	15.1 feet north of south line Chestnut street, on west line Park street		1				
Coburn Ave.	10 feet south of north line Coburn Avenue, on east line Stevens street.....		1				
Dane.....	7.6 feet south of north line Dane street, 15.3 feet west of east line Fletcher street.....		1				
Fourth Ave.....	14.6 feet north of south line Fourth avenue, on west line Moody street.....			1			
Grove.....	12 feet south of north line Grove street, on west line Loring street.....		1				
Hanks	12 feet west of east line Hanks street, on south line Rogers street.....		1				
Lawrence.....	On 10-inch fire service to Sterling mill, 12 feet north of south line Sherman street, 12.6 feet west of east line Lawrence street. (Private).....				1		
Lawrence.....	Check valve, on 10-inch fire service to Sterling mills, 12 feet north of south line Sherman street, 11 feet west of east line Lawrence street. (Private)				1		
Leyden	13 feet east of west line Leyden street, on south line Andover street.....	1					

LOW SERVICE—LIST OF STOP GATES SET DURING 1893.—*Continued.*

STREETS.	LOCATION.	4 in.	6 in.	8 in.	10 in.	12 in.	20 in.
Lowell Hosiery Co	Kennedy gate in middle of mill yard, 59 feet south of Broadway building.....		1				
Magnolia Ave.....	12 feet west of east line Magnolia street, on south line Varnum avenue.....		1				
Middle.....	On fire service to H. R. Barker Mfg. Co., 69 feet east of east line building, 28.7 feet north of south line, Middle street.....		1				
Norwood	12 feet east of west line Norwood street, on south line Midland street.....		1				
Penn Ave.....	14.6 feet east of west line Penn avenue, on south line Plain street.....		1				
Pentucket.....	13 feet west of east line Pentucket street, on south line Andover street.....		1				
Perry	On fire service to Am. Safety Tread Co., 10 feet east of building, 72 feet south of north line buildings		1				
Pumping Sta. No. 3	20-inch gate between force main and receiver.						1
Queen.....	17.3 feet east of west line Queen street, on north line of Westford street.....		1				
Robinson	3 feet south of north line Robinson street, 130 feet west of west line Robinson's court.....	1					
Rogers	16.2 feet south of north line Rogers street, 1 foot west of east line High street.....				1		
Rogers	28.2 feet east of west line Rogers street, on north line Waverly avenue.....				1		
Sixth.....	Fire service to Varnum school, 16.6 feet north of south line Sixth street, 95.3 feet east of east line Myrtle street.....	1					
Sterling Mill.....	On fire service east of mill. Private. (See plan)...		1				
Sterling and Faulkner's Mills.....	Fire service in mill yard. Private. (See plan). ...		2		1		
Sterling and Faulkner's Mills.....	Check valve on fire service in mill yard. Private. (See plan).....		2				
Stevens	28 feet south of north line Stevens street, on west line Chelmsford street.....			1			
Tremont	16.6 feet west of east line Tremont street, on south line passageway. Changed from 6-inch to 12-inch					1	
Tremont	22 2 feet west of east line Tremont street, 3.6 feet north of north line T. & S. storehouse.....					1	
Waverly Ave.....	12 feet east of west line Waverly avenue, on south line Rogers street.....		1				
Wentworth Ave....	13.3 feet east of west line Wentworth avenue, on south line Andover street. (Changed).....	1					

LOW SERVICE—LIST OF HYDRANTS SET DURING THE YEAR 1898.

STREETS.	LOCATION.
Andover	Northerly side on terminus near Town line.
Belrose Ave.....	Southerly side, 3 feet west from Waverly avenue.
Bridge	Easterly side, near Mass. Cotton mill gate.
Bridge	Westerly side, 60 feet south of Central bridge.
Chelmsford	Easterly side, just north of Stevens street.
Faulkner's Mills....	Two-way hydrant east of mill. (Private).
Faulkner's Mills....	Two way hydrant east of mill. (Private).
Faulkner's Mills....	Two-way hydrant east of mill (Private).
Faulkner's Mills....	Four-way hydrant west of mill, on canal bank. (Private).
Fernald.....	Flush hydrant on end of 6-inch pipe.
Hanks	Easterly side, 3 feet south of Rogers street.
Lowell Hosiery Co	Kennedy hydrant in middle of mill yard. (Private).
Manchester.....	Flush hydrant, northerly side, on pipe terminus.
Nasmith.....	Easterly side, opposite Waverly avenue.
Newell	Northerly side, on terminus.
Penn Ave.....	Westerly side, 48 feet south of Plain street.
Perkins	Westerly side, just north of Aiken street.
Sterling Mills.....	Two-way hydrant east of mill. (Private).
Sterling Mills.....	Three-way hydrant east of mill. (Private).
Sterling and Faulkner's Mills.....	Four-way hydrant between mills on canal bank. (Private).

HIGH SERVICE—LIST OF STOP GATES SET DURING THE YEAR 1898.

STREETS.	LOCATION.	4-in.	6-in.	8-in.	10-in.	12 in.	20-in.
Belmont Ave.....	13.6 feet east of west line Belmont avenue, on north line Mansur street.....		1				
Wyman	On fire service to B. F. Butler's stable, 5 feet south of north line Wyman street, 13 feet east of west line Belmont avenue	1					

HIGH SERVICE—LIST OF HYDRANTS SET DURING THE YEAR 1898.

STREET.	LOCATION.
Wyman	Northerly side, opposite Belmont avenue.

LEAD LINED PIPE LAID DURING THE YEAR 1898.

STREETS.	LOCATION.	1½-in.	2-in.	Totals.
Bagley Ave.....	Off Foster street.....		150½	150.5
Maiden Lane... ..	Northerly from Market street.....	91½		91.5
New Nichols	Southerly from Westford street.....		236	236.0
Sherman	Lawrence street, easterly to Sterling Mill.....	480		480.0
	Total.	571½	386½	958.0

PROPERTY AND TOOLS AT SHOP, HAMPSHIRE STREET.

One 8x10 plain slide valve engine, 1 10-foot engine lathe, 1 7-foot engine lathe, 1 6-foot brass finishing lathe, 1 5-foot speed lathe, 1 shaper, 1 upright drill, 1 emery wheel, 1 grindstone, 2 soldering furnaces, 1 large end chuck, 2 independent chucks, 2 drill chucks, 10 lathe dogs, 20 reamers, 10 twist drills, 8 flat drills, 12 flat chucking drills, 42 turning tools, 10 steel arbors, 2 reamers for Desper meters, 21 taps, 3 tap wrenches, 1 hand vise, 4 vises, 2 pipe vises. 1 wagon vise, 1 large platform scales, 3 small platform scales, 1 Smith tapping machine, 1 shaft hanger, 44 tools for brass lathes, 12 sets, 13 cast iron chucks, 1 set hand chasers, 1 set hand tools, 1 set broachers, 25 tools for brass work, 1 set wood patterns for 1-inch sidewalk cocks, 1 set 1-inch Corporation cocks, 1 wood pattern complete for 2-inch plug cock, 1 wood and two brass patterns for handles 1-inch cock, 1 gate of 4 brass patterns for $\frac{3}{4}$ sidewalk cocks, 1 gate of 4 brass patterns for $\frac{3}{4}$ Corporation cocks, 1 gate of 4 brass patterns for plugs for $\frac{3}{4}$ sidewalk cocks, 1 gate of 4 brass patterns for plugs for cellar cocks, 1 gate of four brass patterns for tail pieces for $\frac{3}{4}$ cocks, 1 gate of 4 brass patterns for smooth tail pieces, 1 gate of 4 brass patterns for $\frac{3}{4}$ -inch cock washers, 1 gate of four brass patterns for nuts for $\frac{3}{4}$ -inch cocks, 1 gate of 4 brass patterns for $\frac{3}{4}$ -inch $\frac{1}{2}$ -inch couplings, 1 gate of 4 brass patterns for $\frac{3}{4}$ -inch thimbles, 2 large wood patterns for heads of pumps, 1 wood pattern for packing box to High Service engine, 2 large wood patterns for nuts to plunger rod for pumps, 1 Gow meter testing machine, 1 platform scales with tank for testing meters, 12 Stilson wrenches, 9 S wrenches, 13 hydrant wrenches, 8 post-hydrant wrenches, 8 gate wrenches, 16-inch Kennedy valve, 1 gas radiator, 4 pipe hangers for East Merrimack Street bridge, 4 tapping machines and rubbers, 6 taps and drills, 3 tap wrenches, 1 set plumbers' tools, 2 naphtha furnaces, 1 pair round nose pliers, 2 soldering irons, 3 screw drivers, 15 files 2 dust pans, 4 oil cans, 1 large oil can, 1 set of bits, 1 set of chisels, 1 belt punch, 1 set steel figures, 1 naphtha can, 2 hack saws, 1 pair scissors, 1 pair snips, 1 saw set, 1 desk, 2 gate plans, 1 marlin spike, 2 naphtha lamps, 1 Lowell Water Works seal, 1 set of tools for sealing fire services, 2 tool bags, 1 step ladder, 1 map of water mains, 1 clock, 1 chair, 3 stools, 2 floor brushes, 1 mirror, 1 can of glue, 1 waste can, 1 lawn mower, 1 piper's bench, 6 lengths

of $2\frac{1}{2}$ -inch hose, 1 nozzle, 2 dutchmen, 6 pounds iron wire, 10 pounds brass rod, 5 pounds copper wire.

PROPERTY AT SUPERINTENDENT'S OFFICE.

Three desks, 3 chairs, 1 set of drawers and bookcase, 1 small bookcase, 1 Howard electric clock, 1 letter press, 1 gate plan, 2 diagrams, 1 picture, 4 bill files, 1 water gauge, 2 inkstands, 1 feather duster, 1 set of ward maps.

PROPERTY AND TOOLS AT TOOL HOUSE.

Twelve diamond points, 150 feet tape line, 3 flush hydrant wrenches, 7 picks, 33 lanterns, 78 round pointed shovels, 12 square pointed shovels, 6 long handle shovels, 15 iron mauls, 18 wooden maul, 5 paving mauls, 4 hand saws, 50 feet 1-inch rubber hose, 11 striking hammers, 14 hoes, 2 iron rakes, 5 ladles, 13 gate wrenches, 3 iron blocks and falls for derrick, 3 wooden blocks and falls for derrick, 7 tag ropes, 7 rock chains, 8 sidewalk wrenches, 37 pick handles, 7 steel bars, 20 pounds clay, 2 hatchets, 1 trowel, 2 galvanized iron pails, 4 old pails, 4 dippers, 7 caulking hammers, 9 cold chisels, 7 sets, 4 yarning irons, 3 wedges, 5 clamps, 1 6-inch clip, 11 oil cans, 1 oil tank and pump, 4 tunnels, 10 gallons of oil, 1 long chain, 1 $1\frac{1}{2}$ x 1 inch iron bushing, 50 pounds wrought iron pipe, 2 spanners, 4 post hydrant wrenches, 100 feet of line, 4 man-hole steps, 1 $\frac{3}{4}$ -inch brass valve, 3 6-inch wooden plugs, 2 8-inch wooden plugs, 1 12-inch wooden plug, 1 grate for coke furnace, 5000 old bricks, 7 bridge bolts, 1 8-inch clip, 1 rubber wagon spring, 4 boundary stones, 4 derricks, 25 feet 4-inch soil pipe, 20 feet 6-inch soil pipe, 23 hydrant frames, 27 hydrant covers, 129 gate frames and covers, 2 3-foot extensions, 28 2-foot extensions, 31 extension plugs, 1 square iron gate box, 1 iron part of drinking fountain, 1 drinking fountain complete, $1\frac{1}{2}$ cords of wood, 1 pipe bench, 2 saw horses, 7 wheelbarrows, 1 stove, 12 feet 6-inch stove pipe, 170 fire brick, 4 2-inch tees, 1 mortar box, $\frac{1}{4}$ barrel of red paint, $\frac{3}{4}$ barrel green paint, $\frac{3}{4}$ barrel drab paint, $\frac{1}{2}$ barrel black asphalt, 3 gallons linseed oil, 2 $\frac{3}{4}$ Corporation cocks, 1 faucet, 6 paint pots, 4 odd gate tops, 3 odd bottoms, 7 gate caps, 8 screens, 2 new screens, 2 wagon

jacks, 1 carpenter's bench, 2 door hangers, 1 boat, 2 oars, 3 buck saws, 1 copper hand pump, 1 pattern for wooden gate box, 1 pattern for wooden hydrant box, 1 sand screen, 1 gravel screen, $\frac{1}{2}$ barrel brimstone, 25 logs for blasting, 19 slings, 1 stone drag, 2 dog troughs for fountains, 7 paint brushes, 1 apron for drinking fountain, 5 bridge hangers for pipe, 3 16-inch sleeves for drain pipe, 200 feet $\frac{3}{4}$ -inch iron cable, 2 iron hoops, 2 long handle scoops, 1 screen and frame for cellar window, 1 gallon naphtha, 2 coke furnaces, 4 lead pots, 1 iron for cant hook, 25 old doors, 3 old double windows, 15 old windows, 3 transom windows, 2 5-foot horses for painters, 2 8-foot horses for painters' staging, 4 driving mauls, 6 2-foot horses for carpenters, 1 12-foot fence gate, $\frac{1}{2}$ keg bridge spikes, 430 feet 1-inchx6-inch spruce plank, 103 feet $\frac{7}{8}$ -inch fine finish boards, 180 feet $1\frac{1}{8}$ -inch fine finish boards, 270 feet $\frac{7}{8}$ -inch Northern pine matched boards, 210 feet 2-inch maple plank, 45 cedar posts, 120 4-foot pickets, 1740 5-foot pickets, 2442 feet 2-inchx4-inch fence rails, 9716 feet 2-inch spruce plank, 1000 feet 2-inch kyanized plank, 4 steel tunnel bars, 3 fork wrenches, 5 square head sidewalk wrenches, 40 feet 4-inchx4-inch kyanized plank.

PROPERTY AND TOOLS AT STATION NO. 1.

Eleven wrenches for high duty Worthington, 11 wrenches for low duty Worthington, 11 wrenches for Morris engine, 2 oil dishes, 1 set oil cans, 1 oil filter, 1 work bench, 1 vise, 10 drills, 2 cold chisels, 2 bitstocks, 2 bits, 1 level, 1 keyhole saw, 1 hacksaw, 2 monkey wrenches, 3 sledge hammers, 4 socket wrenches, 1 2-foot steel square, 1 copper hammer, 2 hammers, 2 jackscrews, 1 tool cupboard, 1 set differential blocks, 1 brass hydrant, 2 platform scales, 1 hay scales, 2 step ladders, 5 ladders, 2 lanterns, 2 lawn mowers, 1 barometer, 2 thermometers, 2 iron wheelbarrows, 2 iron pails, 2 indicators, 3 steam gauges, 23 cakes of soap, 1 broom, 2 floor brushes, 1 gas lamp with tubing, 1 24-inch elbow, 6 grate sections with bars, 1 10-inch valve, 2 clocks, 1 bookcase, 1 bed, 3 chairs, 1 table, 1 desk, 1 mop, 1 dustpan, 4 Stillson wrenches, 5 cuspidores, 1 extra check valve for high duty Worthington, 1 set drawings for high duty Worthington, 1 ratchet, 1 flue scraper, 1 oil cupboard, 10 5-inch rubber valves, 10 pounds Italian flax, 50 feet felting, 25 gallons machine oil, 25 gallons cylinder oil, 10 pounds cotton waste, 4

pounds asbestos packing, 30 pounds Knowlton packing, 90 springs for high duty Worthington, 45 brass plates for high duty Worthington, 3 pounds Daniels packing, 12 pounds Garlock packing.

PROPERTY AND TOOLS AT PUMPING STATION, No. 2.

One work bench, 1 vise, 1 bitstock, 1 clock, 1 thermometer, 7 cold chisels, 4 monkey wrenches, 10 socket wrenches, 14 wrenches, 2 pinch bars, 2 gate wrenches, 3 steel drills, 1 sledge hammer, 1 coal hammer, 2 long steel chisels, 4 taps, 1 axe, vice chisels, 2 long handle shovels, 1 grapple rake, 1 hand hole gasket, 1 slice bar, 1 boiler hoe, 2 iron wheelbarrows, 1 platform scales, 4 lamps, 1 30-foot Howe platform scales, 200 feet cotton hose, 2 brooms, 1 map of Lowell, 3 Stillson wrenches, 1 gallon measure, 15 pounds waste, $\frac{1}{2}$ barrel spindle oil, 1 tunnel, 12 pounds hemp packing, 3 oil cans, 1 glass pitcher, 4 glasses, 15 spindles for Dean pump, 35 valve plates, 35 springs, 1 desk, 2 chairs, 1 grindstone, 6 sheets emery paper, 2 files, 1 copper hammer, 2 ladders, 1 step ladder, 1 map, 1 iron pail, 25 feet 1-inch rubber hose, 2 picks, 2 shovels, 1 12-inch die-plate and dies, 1 6-inch pipe cutter, 1 5-gallon oil can, 20 pounds soda ash, 9 gauge glasses, 1 ratchet drill, 2 $\frac{1}{4}$ -inch taps, 6 $1\frac{1}{2}$ -inch iron nuts, 1 brush, 1 well wrench, 1 hydrant wrench, 1500 bricks, 2 fire shovels, 3 60-gallon oil tanks, 1 ring for water piston, 1 $\frac{3}{4}$ -inch tap, 6 pounds ring packing, 1 sprinkling can, 1 square pointed shovel, 1 long handle scoop, 2 long handle shovels, 1 scythe, 2 hoes, 1 iron tube cleaner, 2 mops, 1 2-inch brass valve, 4 2-inch iron couplings, 1 lantern, 25 feet rubber hose for blowing out tubes, 1 2-inch Worthington meter, 1 pair rubber boots, 19 3-inch couplings, 600 pounds old grates, 6 2-inch tees flange branches.

PROPERTY AND TOOLS AT PUMPING STATION No. 3.

Five wrenches for Worthington pump, 1 18-inch monkey wrench, 1 12-inch monkey wrench, 1 8-inch monkey wrench, 2 Stillson wrenches, 4 guard wrenches, 3 offset wrenches, 8 socket wrenches, 2 $\frac{3}{4}$ -inch bolts, 3 $\frac{1}{2}$ -inch bolts, $\frac{1}{2}$ box $\frac{5}{8}$ -inch square flax packing, 1 tunnel, 1 dust pan, 1 brush, 1 broom, 1 2-inch well scraper, 1 brass tray, 6 6 inch rubber valves, 24 4-inch springs, 1 8-foot ladder, 1

step ladder, 1 stand, 1 9-foot running board, 9 feet 1 $\frac{1}{4}$ -inch rubber hose, 8 feet $\frac{3}{8}$ -inch rubber hose, 1 bench, 1 platform scales, 1 iron wheelbarrow, 2 coal shovels, 1 sledge hammer, 1 broom, 1 slice bar, 2 boiler hoes, 1 hook bar, 1 pail, 6 drip pans, 6 brass oil cans and tray, 1 2-quart can, 2 gate wrenches, 3 chairs, 2 dippers, 1 lantern, 3 B. & H. lamps, 2 large lamps, 1 bracket lamp, 1 shade lamp, 2 60-gallon oil tanks, 1 waste can, 6 pounds waste, 1 5-gallon can, 1 iron rake, 1 mop, 1 hoe, 1 24-inch flange, 2 shovels, 1 pick, 1 2-inch scraper, 1 faucet, 1 desk, 18 feet 8-inch pipe, 3 hand hole gaskets, 1 1-inch die stock and die, 1 2-inch die stock and die, 1 $\frac{3}{4}$ -inch die, 1 pipe vise, 1 hydrant wrench, 8 5-inch rubber valves, 22 4 $\frac{1}{2}$ -inch rubber valves, 9 springs for valves, 1 coal hammer, 1 hatchet, 25 feet 1 $\frac{1}{2}$ -inch rubber hose for blowing out tubes, 1 post hydrant wrench, 50 pounds of cement, 1 spirit level.

PROPERTY AND TOOLS AT PUMPING STATION, No. 4.

Two desks, 1 ink stand, 2 chairs, 3 small lamps, 4 large lamps, 5 lanterns, 3 brooms, 1 whisk broom, 1 mirror, 1 gate plan, 3 thermometers, 1 brush, 9 gauge glasses, 3 large lamp wicks, 18 small lamp wicks, 20 sheets emery cloth, 4 2-inch valve discs, 2 1 $\frac{1}{2}$ -inch valve discs, 8 1 $\frac{1}{4}$ -inch valve discs, 3 1-inch valve discs, 3 $\frac{1}{2}$ -inch valve discs, 2-gallon boiler enamel, 50 gallons kerosene, 4 gallons engine oil, 15 gallons cylinder oil, 2 60-gallon oil tanks, 1 cold chisel, 9 socket wrenches, 4 S wrenches, 2 spanner wrenches, 1 24-inch Stillson wrench, 1 24-inch monkey wrench, 11 2-inch Stillson wrench 2 12-inch monkey wrenches, 1 pair 2 $\frac{1}{2}$ -inch adjustable pipe tongs, 17 pump wrenches, 10 packing hooks, 11 eye bolts, 1 screw driver, 1 oil set with stand, 2 hammers, 2 oil cans, 1 saw, 1 hatchet, 1 dust pan, 2 mops, 1 lever for feed pump, 25 pounds of waste, 1 floor brush, 15 large lamp chimneys, 13 small lamp chimneys, 20 pounds square tucks packing, 2 pounds Knowlton ring packing, 3 feet $\frac{1}{4}$ -inch square Garlock packing, 15 feet $\frac{3}{8}$ -inch square Garlock packing, 10 feet $\frac{1}{2}$ -inch square Garlock packing, 2 pounds Jenkins sheet packing, 3 pounds rainbow packing, 2 pounds sheet rubber sheet packing, 1 ball lamp wicking, 1 hand lamp, 2 pounds hemp packing, 2 pounds tallow, 1 level, 12 pump valves, 1 set pump springs, 9 fire irons, 1 gate wrench, $\frac{1}{2}$ cask lime, 1 half-barrel mineral paint, 1 boat, 1 iron rake, 3 shovels, 2 picks, 3 coal shovels, 1 grind-

stone, 1 scythe and snath, 1 3-inch tube scraper, 1 blow out hose, 50 feet $\frac{3}{4}$ -inch rubber hose, 1 ground hoe, 1 bench, 1 vise, 1 anvil, 1 coal barrow, 1 wheelbarrow, 1 pump, 1 platform scales, 1 whitewash brush, 1 set grate bars, 20 feet of small chain, 50 feet $\frac{1}{2}$ -inch pipe for cleaning wells, 2 dippers, 1 sledge hammer, 1 trowel, 1 20-foot ladder, 4 feet 6-inch soil pipe, 200 feet 2-inch plank, 1 2-inch flange coupling, 8 1-inch couplings, 1 $1\frac{1}{4}$ -inch coupling, 1 $2\frac{1}{2}$ -inch elbow, 5 $\frac{1}{2}$ -inch couplings, 2 $1\frac{1}{4}$ -inch elbows, 1 1-inch elbow, 3 $\frac{3}{4}$ -inch elbows, 2 $\frac{3}{8}$ -inch elbows, 10 $\frac{1}{2}$ -inch elbows, 1 $1\frac{1}{2}$ -inch tee, 5 1-inch tees, 6 $\frac{1}{2}$ -inch tees, 1 $\frac{3}{8}$ -inch tee, 1 $\frac{1}{4}$ -inch tee, 3 pipe hangers, 1 $\frac{3}{4}$ -inch service cock, 7 feet $1\frac{1}{4}$ -inch brass pipe, 21 feet 2-inch iron pipe, 20 feet $1\frac{1}{2}$ -inch iron pipe, 14 feet $1\frac{1}{4}$ -inch iron pipe, 15 feet 1-inch iron pipe, 21 feet $\frac{3}{4}$ -inch iron pipe, 75 feet $\frac{1}{2}$ -inch iron pipe, 31 feet $\frac{3}{8}$ -inch iron pipe, 12 feet $\frac{1}{4}$ -inch iron pipe.

PROPERTY AT STABLE.

Seven horses, eight single harnesses, 1 set double harness, 8 street blankets, 1 single truck, 1 double truck, 7 sleighs, 1 Goddard buggy, 5 wagons, 2 democrat wagons, 7 stable blankets, 4 brooms, 6 brushes, 6 curry combs, 6 pitchforks, 50 feet 1-inch rubber hose, 1 string of bells, 1 chamois, $\frac{1}{4}$ -box harness blacking, 5 sponges, 1 wagon jack, 1 hay cutter, 2 feed boxes, 1 sprinkling can, 6 whips, 11 tons of hay, 375 bushels oats, 700 pounds straw, $\frac{1}{4}$ -barrel Standard Food, 25 pounds shorts, 3 lap robes, 1 wolf skin robe, 2 pails, 3 pounds axle grease, 1 can harness oil, 1 large sunshade, 2 wagon covers, 1 scythe, 1 round pointed shovel, 1 bench, 1 cupboard, 400 pounds rock salt, 7 fly nets, 5 harness hooks, 7 halters, 1 snow shovel, 1 scoop shovel, 4 bail hooks, 3 hitch ropes, 2 wagon tops, 1 carriage top.

PROPERTY AND TOOLS AT BLACKSMITH SHOP.

One forge and bellows, 3 anvils, 1 sledge hammer, 1 striking hammer, 3 blacksmith hammers, 1 caulking hammer, 1 steel square, 11 cutters, 5 handle punchers, 6 hand punchers, 32 blacksmith's tools, 1 gate wrench, 14 pair tongs, 1 pair calipers, 1 work bench, 1 vise, 1 draw knife, 2 Lowell Water Works stamps, 1 portable forge,

1000 pounds old iron, 30 pounds pick steel, 20 pounds machine steel, 25 pounds Norway iron, 1 closet, 1 pair pliers, 49 picks, 1 grub pick, 3 stone chains, 8 crow bars, 1 coal hod, 92 old iron nuts, 1 coal shovel, 50 pounds blacksmith's coal, 131 feet $1\frac{1}{8}$ -inch drills, 89 feet $1\frac{1}{4}$ -inch drills, 25 feet tag rope chain, 9 spoons, 9 pick handles, 1 stone mason hammer, 1 spanner, 1 file, 1 blacksmith sow, 1 broom, 1 steel tunnelling bar, 20 pounds wrought iron, 21 feet 1-inch drill steel, 1 tee sidewalk wrench, 1 water pail.

PROPERTY AT RESERVOIR—[LOW SERVICE].

One boat, two lawn mowers, 1 scythe, 1 wooden rake, 1 vine rake, 1 snath, 1 long handle shovel, 1 crow bar, 1 monkey wrench, 1 long handle hoe, 1 wooden shovel, 1 axe, 1 ice chisel, 1 lantern, 1 wheelbarrow, 1 broom, 1 pail.

PROPERTY AND TOOLS AT INLET HOUSE.

One hoe, 1 ice dipper, 1 gate wrench, 1 ice chisel, 1 ice hook, 1 square pointed shovel.

PROPERTY AND TOOLS AT GALLERY HOUSE.

Sixteen screens, 1 boat, 3 oars, 2 sets iron blocks and falls, 2 tag ropes, 1 gate wrench, 1 fork wrench, 1 tee wrench, 1 snow shovel, 1 round pointed shovel, 1 broom, 1 ice rake, 2 ice Hooks, 25 feet 1-inch rubber hose.

PROPERTY AND TOOLS AT BODWELL GATE HOUSE.

One round pointed shovel, 1 gate wrench, 1 pick, 1 12-foot ladder.

MOVEABLE FIXTURES AND PROPERTY AT OFFICE, CITY HALL.

Two roll-top desks, 2 standing desks, 1 double flat desk, 1 3-place inspector's desk, 1 2-place inspector's desk, 2 single inspector's

desks, 2 heavy oak tables, 1 typewriter desk, 1 Remington typewriter, 1 small table, 1 vault table, 2 swivel upholstered chairs, 6 upholstered chairs, 12 cane seated arm chairs, 8 swivel cane seated chairs, 2 high chairs, 2 stools, 1 step chair, 1 settee, 1 bookcase, 1 water tank, 2 water-pressure gauges, 2 thermometers, 1 clock, 2 table gas lamps, 33 framed pictures—plans, etc.; 2 floor rugs, 1 rubber mat, 1 set street tools, 2 earthen spittoons, 6 brass spittoons, 6 waste paper baskets, 1 shovel (historic), 2 mirrors, 1 letter copying press, 2 umbrella racks, 20 inkstands, 2 pen racks, 1 gas stove, 4 book racks, set tools (hammer, wrench, 2 screwdrivers, wire cutter, 1 plane, 1 saw, 1 chisel), 3 tumblers, boot-blackening outfit, 1 hair brush, 1 clothes brush, 1 match chest, 1 fire insurance map of Lowell, 1 atlas city of Lowell, 5 tin yearly boxes, 1 set Massachusetts statutes, 1 large dictionary, 1 large photograph album, 1 revolving bookcase, 1 card index case.

PROPERTY AND TOOLS IN STOCK ROOM.

Nineteen hundred pounds of pig lead, 256 pounds old lead, 278 pounds yarn, 925 pounds wiping solder, 425 pounds soft solder, 173 pounds sheet rubber packing, 494 feet $\frac{3}{4}$ -inch lead lined iron pipe, 625 feet 1-inch, 104 feet $1\frac{1}{4}$ -inch, 1297 feet $1\frac{1}{2}$ -inch, 211 feet 2-inch, 50 feet 2-inch iron pipe, 1 8-inch hydrant disc, 2 6-inch hydrant discs, 1 4-inch hydrant disc, 10 backs for fountains, 6 bottoms for fountains, 11 aprons for fountains, 148 assorted rubber gaskets, 17 assorted rubber washers, 7 barrels of cement, 27 pounds dualin, 40 exploders, 3 pounds grass seed, 2 batteries with wires, 2 rolls copper wire, 1 barrel of lantern globes, 57 pounds of clay, 61 assorted portions brass spindles for gates, 49 spindles for hydrants, 7 independent gates for Chapman hydrant, 2 brass nipples for hydrants, 25 hydrant caps, 4 lengths $2\frac{1}{2}$ -inch rubber hose, 2 brass bushings for Worthington pumps, 2 brass heads for Worthington pumps, 2 4-inch iron valves, 8 iron plates for water gates, 66 $\frac{3}{4}$ -inch goose necks, 11 1-inch goose necks, 1 2-inch goose neck, 4 Chapman hydrant tops, 2 Boston Post hydrant tops, 2 barrels for Chapman hydrant, 19 hydrant spindles, 15 leather valves for hydrants, 17 flush hydrants, 2 2-inch Peet valves, 7 spirit levels, 14 gallons Solarine metal polish, 4 cans Solarine paste, 2 cans raw umber, 8 pounds putty, 85 pounds plumago, 19 pipe tongs, 3 pairs

chain tongs, 13 die stocks, 47 dies, 5 pipe cutters, 7 caulking hammers, 1 iron jack, 1 6-inch flange offset, 1 4-inch flange offset, 160 pounds cotton waste, 1 pipe rack, 3 Pitcher pumps, 1 oil tank with pump connected, 48 gallons cylinder oil, 1 tunnel, 3 pounds of mop waste, 10 pounds $\frac{1}{4}$ inch copper wire, 1 bull's-eye lantern, 17 pounds leather, 17 assorted post hydrant wrenches, 9 flush hydrant wrenches, 11 lengths hose for marine pumps, 3 tapping machines; lead pipe—200 pounds 2-inch, 142 pounds $1\frac{1}{2}$ -inch, 615 pounds 1-inch, 1250 pounds $\frac{3}{4}$ -inch, 625 pounds $\frac{5}{8}$ -inch, 250 pounds 4-inch, 25 feet chain for fountain dipper, 10 pounds prepared flax packing, 1 6-inch tapping machine complete, 5 tapping drills, 1 ratchet and chain, 1 marlin spike, 1 full set of hydrant tools, 1 set bridge irons for staging, 20 pounds felt, 2 sets 24-inch heads and rods for floating pipe, 83 pounds sheet lead, 15 tons old iron, 1 4-foot pulley for motor, 35 feet 1-inch copper wire; meters—4 2-inch Worthingtons, 5 $1\frac{1}{2}$ -inch Worthingtons, 1 1-inch Worthington, 9 $\frac{5}{8}$ -inch Worthington, 4 1-inch Crowns, 3 $\frac{3}{4}$ -inch Crowns, 2 $\frac{5}{8}$ -inch Crowns, 2 $\frac{3}{4}$ -inch Empires, 1 $\frac{5}{8}$ -inch Empire, 1 $\frac{3}{4}$ -inch Nash, 6 $\frac{5}{8}$ -inch Nash, 3 $\frac{3}{4}$ -inch Lamberts, 2 $\frac{5}{8}$ -inch Lamberts, 10 $\frac{3}{4}$ -inch Tridents, 4 $\frac{5}{8}$ -inch Tridents, 9 $\frac{3}{4}$ -inch Unions, 6 $\frac{5}{8}$ -inch Unions, 6 $\frac{3}{4}$ -inch Herseys, 4 $\frac{5}{8}$ -inch Herseys, 6 $\frac{3}{4}$ -inch Niagaras, 5 $\frac{5}{8}$ -inch Niagaras, 4 $\frac{5}{8}$ -inch Columbias, 1 6-inch Gem, 2 bottoms for $\frac{5}{8}$ -inch Trident meters, 12 clocks for $1\frac{1}{2}$ inch and 2-inch Worthington meters, 20 clocks for $\frac{5}{8}$ -inch Worthingtons, 15 tops and ratchets for Worthington meters, 18 covers for $\frac{5}{8}$ -inch Crown meters, 29 covers for $\frac{3}{4}$ -inch Crown, 9 covers for 1-inch Crown, 4 1-inch cellar cocks, 13 1-inch sidewalk cocks, 7 1-inch Corporation cocks, 9 $\frac{3}{4}$ -inch cellar cocks, 97 sidewalk cocks, 68 $\frac{3}{4}$ -inch Corporation cocks; brass castings—109 $\frac{3}{4}$ -inch plugs for cellar cocks, 19 $\frac{3}{4}$ -inch plugs for sidewalk cocks, 152 $\frac{3}{4}$ -inch plugs for Corporation cocks, 7 1-inch plugs for Corporation cocks, 1 1-inch plug for cellar cock, 251 barrels for Corporation cocks, 622 washers for $\frac{3}{4}$ -inch cocks; clips—1 30-inch, 1 24-inch, 1 16-inch, 2 12-inch, 2 10-inch, 5 8-inch, 4 6-inch, 12 clamps, 1 cross cut saw, 3 paving hammers, 1 blade for scythe, 139 brass tags, 19 $\frac{3}{4}$ -inch steam gauge glasses, 1 50 foot steel tape line, 31 $\frac{3}{8}$ -inch rubber washers, 4 4-inch lamp wicks, 1 whitewash brush, 45 lanterns, 5 21-pound sledge hammers, 2 round pointed shovels, 3 coal scoops, 16 pick handles, 4 brass padlocks, 4 locks and keys, 2 chisels, 1 boiler tube cleaner, 3 plumb bobs, 1 dipper, 7 small chimneys for lanterns, 7 brass screws for marine pumps, 90 $2\frac{1}{2}$ -inchx $\frac{1}{2}$ -inch bolts, 1 $1\frac{1}{2}$ -inch steam valve, 1 steam gauge, 1 electric

gong, 1 belt for electric moror, 229 lag screws, 50 hand hole gaskets, 4 man hole gaskets, 70 1-inch plugs, 10 $\frac{3}{4}$ -inch plugs, 1 box toilet paper, 7 pounds assorted bolts, 10 brooms, 2 crow bars, 1 pinch bar, 1 adze, 105 iron washers, 7 cast iron pipe cutters, 3 small brass pumps, 50 feet block tin tubing, 50 feet block tin rod, 17 diamond points, 4 yarning irons, 15 caulking sets, 7 cold chisels, 11 wedges, 3 bursting wedges, $1\frac{1}{2}$ -pounds shims and wedges, 11 stone points, 2 bull points, 2 rubber seats, 22 pair rubber boots, 200 pounds tallow, 22 pounds braided hemp packing, 16 pounds Euraka packing, 6 pounds ring packing, 50 feet rubber hose, 56 pounds rainbow packing, 40 pounds rubber packing, 3 lights of glass, 10 hand drills, 1 jaw for 24-inch Stillson wrechch, 7 Lowell Water Works stamps, 1 Norton door check and spring, 1 steel square, 1 $1\frac{1}{2}$ -inch augur, 6 $\frac{3}{4}$ -inch valves, 1 set bevel gears for gate, 3 gallons lard oil, 1 iron top for marine pump, 2 hand brushes, 1 floor brush, 4 diaphragms for marine pump, 4 pounds sponges, 317 $1 \times \frac{3}{4}$ -inch couplings, 195 $\frac{3}{4}$ -inch smooth tail pieces, 720 nuts for $\frac{3}{4}$ -inch cocks, 59 1-inch washers, 44 $\frac{3}{4}$ -inch elbows, 36 $\frac{3}{4} \times \frac{1}{2}$ -inch elbows, 260 $\frac{3}{4} \times \frac{1}{2}$ -inch couplings, 27 1-inch smooth tail pieces, 6 portions of valves for Worthington pump; iron fittings, lead lined—5 $1\frac{1}{2}$ -inch Unions, 5 2-inch Unions, 8 2-inch nipples, 12 $1\frac{1}{4}$ -inch nipples, 6 2x1-inch crosses, 2 1-inch crosses, 2 $\frac{3}{4}$ -inch crosses, 4 $1\frac{1}{2} \times \frac{3}{4}$ -inch crosses, 6 2x1 $\frac{1}{2}$ -inch crosses, 36 1-inch couplings, 18 2 inch couplings, 17 $1\frac{1}{2}$ -inch couplings, 2 2x1-inch reducing couplings, 11 2x1 $\frac{1}{2}$ -inch, 11 $1\frac{1}{2} \times 1$ -inch, 17 $1 \times \frac{3}{4}$ -inch, 136 $\frac{3}{4} \times \frac{1}{2}$ -inch, 94 $\frac{3}{4}$ -inch elbows, 5 $1\frac{1}{4}$ -inch, 7 2-inches, 5 $1\frac{1}{2} \times \frac{1}{8}$ -inch turns, 4 2-inch $\frac{1}{8}$ turns, 24 $1 \times \frac{3}{4}$ -inch tees, 9 $1\frac{1}{2}$ inch, 2 $2 \times \frac{3}{4}$ inch, 11 $1\frac{1}{4} \times \frac{3}{4}$ -inch, 2 $1\frac{1}{2} \times \frac{3}{4}$ -inch, 17 $2 \times \frac{3}{4}$ -inch, 19 $\frac{3}{4}$ -inch tees.

IRON FITTINGS.—289 $\frac{3}{4}$ inch couplings, 242 1-inch, 15 $1 \times \frac{1}{2}$ inch, 33 $1 \times \frac{3}{4}$ -inch, 81 $\frac{3}{4} \times \frac{1}{2}$ -inch, 5 $1\frac{1}{2} \times 1\frac{1}{4}$ -inch, 40 2-inch, 57 $1\frac{1}{2}$ -inch, 164 1-inch, 110 $\frac{3}{4}$ -inch, 32 $1\frac{1}{4}$ inch, 72 $1 \times \frac{1}{2}$ -inch reducing couplings, 5 $1\frac{1}{4} \times \frac{1}{2}$ -inch, 8 $1\frac{1}{4} \times 1$ -inch, 82 $1 \times \frac{3}{4}$ -inch, 97 $\frac{3}{4} \times \frac{1}{2}$ -inch, 9 $\frac{3}{4}$ -inch crosses, 7 1-inch, 10 $1\frac{1}{2} \times 1$ -inch, 2 2x1-inch, 66 1-inch nipples, 32 $\frac{3}{4}$ -inch, 13 $1\frac{1}{4}$ -inch, 3 2-inch, 12 $1\frac{1}{2}$ -inch, 6 1-inch caps, 7 $1\frac{1}{2}$ inch, 1 2-inch plug, 58 1-inch, 11 $1\frac{1}{4}$ -inch, 7 $1\frac{1}{2}$ -inch, 116 $\frac{3}{4}$ -inch, 101 1-inch elbows, 8 2-inch, 10 $1\frac{1}{2}$ -inch, 84 $\frac{1}{4}$ -inch, 7 $1\frac{1}{4} \times 1$ -inch, 1 2x1-inch tee, 1 2x1 $\frac{1}{2}$ -inch, 4 $1\frac{1}{4}$ -inch, 4 $1\frac{1}{2} \times \frac{3}{4}$ -inch, 3 $1\frac{1}{2}$ -inch, 3 $1\frac{1}{4} \times 1$ -inch, 4 1-inch, 10 2-inch unions, 15 $1\frac{1}{2}$ -inch, 71 1-inch, 51 $\frac{3}{4}$ -inch, 45 $1\frac{1}{2} \times \frac{1}{2}$ -inch bushings, 1 2x1 $\frac{1}{2}$ -inch 1 $1\frac{1}{2} \times \frac{1}{2}$ -inch, 75 $1 \times \frac{3}{4}$ -inch, 91 $\frac{3}{4} \times \frac{1}{2}$ -inch, 8 2x1-inch y, 12 1-inch meter unions, 159 $\frac{3}{4}$ -inch, 115 $\frac{5}{8}$ -inch, 34 1-inch solder nipples, 62 $1 \times \frac{3}{4}$ -inch 27 $\frac{3}{4}$ -inch.

FLANGE PIPE.—10 lengths 10-inch, 6 lengths 6-inch, 10 lengths 4-inch, 16 feet 24-inch; flange specials—4 16x12-inch, three ways, 1 8x6-inch three ways, 6 10x8-inch reducers, 9 12x10 inch reducers, 1 18x16-inch reducer, 1 6-inch cap, 1 10-inch cap, 1 8-inch sleeve, 40 4-inch sleeves, 4 6½-inch turns, 1 ½-inch turn, 2 10 inch $\frac{1}{4}$ turns, 1 10-inch $\frac{1}{8}$ turn.

CAST IRON PIPE IN PIECES.—30-inch, 19 feet; 24-inch, 62 feet; 20-inch, 67 feet; 16-inch, 45 feet; 10-inch, 11 feet; 8-inch, 11 feet 6-inches; 6-inch, 28 feet, 4-inch, 17 feet; 1 30-inch man hole, 1 6x2-inch Smith sleeve, 1 30-inch clamp sleeve, 1 24-inch clamp sleeve, 129 feet wrought iron pipe, 40 feet 4-inch, 2 Ludlow hydrants, 1 Coffin hydrant, 115 iron sidewalk boxes, 3 iron gate boxes, 5 wooden hydrant boxes, 3 6-inch check valves, 2 10-inch indicator gates, 4 6-inch indicator gates.

REPORT OF CITY ENGINEER.

OFFICE OF CITY ENGINEER,

LOWELL, MASS., Jan. 1, 1899.

To the Lowell Water Board:

Gentlemen—I have the honor to submit the Twenty-sixth annual report for the year ending December 31, 1898:

PUMPAGE.

Total Pumpage for 1898 . . .	2,452,212,843	Galls.
Total Pumpage for 1897 . . .	2,406,240,452	"
An increase in 1898 of . . .	45,972,391	"
Increase in consumption in 1898 .	47,632,251	"

The greatest quantity pumped in one day in 1898 was 10,884,874 gallons, on February 2nd.

The greatest quantity pumped in one week was 66,853,654 gallons, an average of 9,550,522 gallons per day, which was pumped during the week of January 30th to February 5th.

High service pumpage for the year is 40,084,506 gallons, a decrease of 4,998,210 gallons from the quantity pumped last year.

The cost of pumping from low service pressure into the high service reservoir was Eleven Dollars and Seventy-five Cents (\$11.75) per million gallons, which, added to the cost of low service pumpage, Thirteen Dollars and Ninty-nine Cents (\$13.99) per million gallons, makes the total cost of high service pumpage for the year 1898 Twenty-five Dollars and Seventy-four Cents (\$25.74) per million gallons.

The following table shows source of supply, quantity pumped and cost per million gallons at the several pumping stations during the year 1898.

TABLE SHOWING SOURCE OF SUPPLY, QUANTITY PUMPED AND COST AT THE SEVERAL STATIONS DURING THE YEAR 1898.

PUMPING STATIONS.	SOURCE OF SUPPLY—WELL WATER.				COST.	
	163 Driven Wells at Pawtucket Boulevard and Filter Gallery.	90 Driven Wells at City Farm	130 Driven Wells in Chelmsford, Mass.	Distributing Mains of Low Service System.	Total in U. S. Gallons.	Per Million Gallons.
No. 1 (West Sixth St.)	1,120,131,565				1,120,131,565	\$ 8 18
Low Service.....		
High Service		
No. 2 (Cook Wells).....		
No. 3 (Hydraulic Wells)		
No. 4 (Boulevard Wells)		
Total Pumpage	1,065,450,387	.....	.....	.....	1,065,450,387	6 88
Deduct quantity pumped twice— Pumped at Station 4 and re- pumped at Station 1	
Repumped by High Service.....	
Net Pumpage.....	\$14 18
Exclusive of High Service pump- page.....	13 99

The following tables showing the performance of the engines at Station No. 1 on West Sixth Street, depth and quantity of water in reservoir, average temperature of air and water, and the average monthly and daily consumption of water, have been calculated and compiled from the records of the engineer and gatekeeper.

TABLE SHOWING WORK DONE WITH WORTHINGTON DUPLEX ENGINE FOR EACH MONTH
DURING THE YEAR 1898.

MONTHS	No. of days pumping	Average No. of hours pumping per day	No. of hours pumping per month	No. of strokes made per month.	Average No. of strokes made per minute.	Average head, including friction in feet.	Quantity pumped in U. S. gallons.	Average Quantity pumped per day in U. S. gallons.	No. gals. of water pumped into reservoir per lb. of total coal consumed.	Duty in lbs. 100 lbs. coal used in pumping only; no deduction for ashes or clinkers.	Duty on total coal consumed; no deduction for ashes or clinkers.
January.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February.....	2	7-53	15-45	10,784	11.41	161.4	3,343,040	1,671,520	350	47,082,348	47,082,348
March.....	9	18-57	170-30	98,890	9.67	161.56	30,655,900	3,406,211	406	55,055,821	54,648,228
April.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
July.....	16	23-00	308-00	211,306	9.57	162.37	65,504,860	4,094,654	417	56,404,039	56,404,039
August.....	3	10-20	31-00	18,326	9.85	162.02	5,681,060	1,883,687	417	56,280,182	56,280,182
September.....	4	18-07	72-30	43,106	9.91	161.97	13,362,860	3,340,775	394	53,248,598	53,248,598
October.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November.....	5	17-30	87-30	42,362	8.07	162.28	13,132,220	2,626,444	407	57,406,145	55,003,278
December.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and Averages..	39	19-07	745-15	424,774	9.50	162.06	131,679,940	3,376,409	409	55,572,115	55,226,975

TABLE SHOWING WORK DONE WITH WORTHINGTON HIGH DUTY ENGINE FOR EACH MONTH DURING THE YEAR 1898.

MONTHS.	No. of days pumping.	Average No. of hours pumping per day.	No. of hours pumping per month.	No. of strokes made per month.	Average No. of strokes made per minute.	Average head, including friction in feet.	Quantity pumped per month in U. S. gallons.	Average quantity pumped per day in U. S. gallons.	No. gals. of water pumped into reservoir per lb. of total coal consumed.	Duty in lbs. 1 ft. high with 100 lbs. coal used in pumping only; no deduction for ashes or clinkers.	Duty on total coal consumed; no deduction for ashes or clinkers.
January.....	27	10-22	271-00	141,147	8.68	163.94	52,930,125	1,960,375	520	86,966,680	71,069,885
February.....	22	11-55	262-00	152,201	9.08	163.98	57,075,375	2,594,335	558	89,693,000	76,199,140
March.....	20	13-27	269-00	143,903	8.92	163.83	53,963,625	2,498,181	625	98,728,023	85,347,600
April.....	26	20-29	532-30	243,138	7.61	163.86	91,176,750	3,506,798	709	101,834,356	96,844,378
May.....	6	18-20	110-00	61,378	9.30	163.78	23,016,750	3,836,125	439	87,552,714	59,860,397
June.....	21	23-57	485-00	203,880	7.01	163.88	76,455,000	3,640,714	635	91,068,833	86,756,020
July.....	16	23-19	373-00	169,804	7.59	164.19	63,676,500	3,979,781	715	97,903,727	97,903,727
August.....	31	22-58	712-00	356,560	8.35	164.07	132,710,000	4,313,226	661	90,839,813	90,390,688
September.....	28	23-05	646-30	316,297	8.15	164.07	118,588,875	4,235,317	631	86,277,627	86,277,627
October.....	27	22-37	610-30	284,475	7.77	164.14	106,678,125	3,951,042	627	86,233,520	85,726,940
November.....	27	20-41	558-30	234,335	6.99	163.91	87,875,625	3,254,653	545	81,530,332	74,451,051
December.....	31	22-45	705-30	328,813	7.77	163.93	123,304,875	3,977,577	614	85,663,080	83,871,808
Totals and Averages..	282	19-38	5535-30	2,635,871	7.94	163.98	988,451,625	3,505,148	616	89,525,163	81,248,731

TABLE SHOWING AMOUNT OF COAL USED FOR WORTHINGTON
 DUPLEX ENGINE AT PUMPING STATION
 DURING THE YEAR 1898.

MONTHS.	COAL CONSUMED.			
	For starting fires, in lbs.	When pump- ing, in lbs.	For banking fires, in lbs.	Total per month, in lbs.
January
February.....	9,552	.....	9,552
March	74,931	600	75,531
April
May.....
June.....
July	157,153	.....	157,153
August	13,630	.....	13,630
September	33,875	.....	33,875
October
November	600	30,890	800	32,290
December.....
Totals	600	320,031	1,400	322,031

TABLE SHOWING AMOUNT OF COAL USED FOR WORTHINGTON
HIGH DUTY ENGINE AT PUMPING STATION
DURING THE YEAR 1898.

MONTHS.	COAL CONSUMED.			
	For starting fires, in lbs.	When pump- ing, in lbs.	For banking fires, in lbs.	Total per month, in lbs.
January .....	.....	83,155	18,600	103,755
February	1,000	86,963	14,400	102,363
March	3,000	74,629	8,700	86,329
April	1,500	122,269	4,800	128,569
May	1,000	35,883	15,600	52,483
June	300	114,661	5,400	120,361
July .....	.....	88,998	.....	88,998
August	1,000	201,266	.....	202,266
September .....	.....	187,944	.....	187,944
October	1,000	169,226	... ..	170,226
November	6,000	147,234	8,000	161,234
December	1,800	196,652	2,400	200,852
Totals	16,600	1,508,880	77,900	1,603,380

TABLE SHOWING WORK DONE WITH WORTHINGTON HIGH SERVICE ENGINE FOR EACH MONTH DURING THE YEAR 1898.

MONTHS.	No. of days pumping.	Average No. of hours pumping per day.	No. of hours pumping per month.	No. of strokes made per month.	Average No. of strokes made per minute.	Average head including friction in feet.	Quantity pumped per month in U. S. gallons.	Average quantity pumped per day in U. S. gallons.	No. gals of water pumped into reservoir per lb. total coal consumed.	Coal in lbs. used when pumping.
January	25	10.36	265.00	190,146	11.96	69.44	2,662,044	106,482	299	8,905
February	19	12.32	229.00	161,820	11.78	69.44	2,265,480	119,236	301	7,515
March	22	16.27	353.00	297,991	9.82	69.44	2,911,874	132,358	300	9,695
April	22	18.50	414.30	188,405	7.58	69.44	2,637,670	119,894	300	8,786
May	14	10.00	140.00	144,263	17.17	69.44	2,019,682	144,263	300	6,727
June	23	22.23	515.00	255,837	8.28	87.57	3,581,718	155,727	300	11,936
July	31	24.00	744.00	358,765	8.04	92.59	5,622,710	162,023	300	16,736
August	31	24.00	744.00	347,825	7.79	92.59	4,869,550	157,082	300	16,214
September	30	24.00	720.00	331,865	7.68	92.59	4,645,270	154,842	299	15,546
October	27	22.42	613.00	316,539	8.61	87.45	4,431,546	164,131	300	14,769
November	14	16.26	230.00	163,615	11.86	69.44	2,290,610	163,615	305	7,511
December	15	19.56	299.00	196,168	10.33	69.44	2,746,352	183,090	300	9,153
Totals and Averages ...	273	19.17	5266.30	2,863,179	9.06	— 80.56	40,084,506	146,830	300	133,433

PUMPING STATION, WORTHINGTON DUPLEX ENGINE.
RUNNING EXPENSES FOR THE YEAR 1898.

Pay of engineers and firemen.....	\$565 86
43 1208-2000 tons of coal (Cumberland, 1897), at \$3.455	150 65
117 823-2000 tons of coal (Cumberland, 1898), at \$3,393	398 38
Electric light	20 25
Gas for lighting works.....	16 52
46.70 gallons of cylinder oil, at 0.542—	25 30
4.42 gallons of machine oil, at 0.198+	87
25.09 pounds of packing, at 0.877+	22 02
20.9 pounds of cotton waste, at 0.06 $\frac{1}{4}$	1 31
11 pounds of tallow, at 0.04 $\frac{1}{4}$	47
Repairs on engine.....	3 35
Repairs on boilers.....	8 42
Tools and stock	4 80
Sundries	3 84
<hr/>	
Total	\$1,222 04

Cost of pumping water into reservoir per million gallons, \$9.28.

Cost of pumping water one foot high per million gallons, .05 73-100.

PUMPING STATION, WORTHINGTON HIGH DUTY ENGINE.
 RUNNING EXPENSES FOR THE YEAR 1898.

Pay of engineers and firemen.....	\$4,372 56
340 tons of coal (Cumberland, 1897), at \$3.455.....	1,174 70
461 1380-2000 tons of coal (Cumberland, 1898), at \$3.393	1,566 51
Electric light.....	156 49
Gas for lighting works.....	127 67
360.82 gallons of cylinder oil, at 0 542—.....	195 48
34.17 gallons of machine oil, at 0.198+.....	6 77
193.86 pounds of packing, at 0.877+.....	170 09
161.5 pounds of cotton waste, at 0.06 $\frac{1}{4}$	10 09
89 pounds of tallow, at 0.04 $\frac{1}{4}$	3 78
Repairs on engine.....	26 17
Repairs on boilers	65 10
Tools and stock	37 09
Sundries	29 66
<hr/>	
Total.....	\$7,942 16

Cost of pumping water into reservoir per million gallons, \$8.03+.

Cost of pumping water one foot high per million gallons, .04 90-100.

RESERVOIR, BEACON STREET, 1898.

MONTHS.	Depth in feet.	Quantity in U S. Gallons.	Temperature in degrees.	
			Of water.	Of air.
January	19.83	30,219,027	43.12	24.94
February	19.50	29,664,877	41.71	28.56
March	19.24	29,239,892	45.60	41.69
April	19.29	29,322,283	47.68	42.68
May	17.19	25,844,397	54.45	56.53
June	18.63	28,223,292	64.30	66.48
July	17.94	27,078,072	70.61	72.96
August	19.26	29,262,226	73.94	72.35
September	19.10	28,993,625	69.50	65.49
October	18.16	27,433,018	61.58	52.73
November	19.98	30,480,736	51.63	40.05
December	19.15	29,076,682	43.67	28.42

TABLE SHOWING THE AVERAGE MONTHLY AND DAILY CONSUMPTION OF WATER FOR THE YEAR 1898.

MONTHS.	Gallons per month.	Gallons per day.
January	240,864,291	7,769,816
February	202,854,269	7,244,795
March....	193,213,632	6,232,698
April.....	186,084,835	6,202,828
May.....	198,248,509	6,395,113
June	198,361,448	6,612,048
July.....	221,458,681	7,143,828
August.....	216,090,052	6,970,647
September.....	202,293,572	6,743,119
October	195,319,193	6,300,619
November	183,860,970	6,128,699
December	215,925,813	6,965,319
Totals and Averages	2,454,575,265	6,724,864

SUMMARY OF STATISTICS.

REPORT OF 1898.

In accordance with the recommendations of the New England
Water Works Association.

LOWELL WATER WORKS, MIDDLESEX COUNTY, MASS.

Population by census of 1895, 84,359.

Date of construction, 1870 to 1873.

Date of construction, High Service, 1881.

Date of construction, Driven Wells, 1893 to 1896.

Source of supply—two hundred twenty (220) driven wells in the
valley of River Meadow Brook and one hundred sixty-nine
(169) driven wells at Pawtucket Boulevard, and filter
gallery to June 10th, 1898.

Mode of supply, pumping to reservoir and pumping direct.

PUMPING.

1. Builders of pumping machinery :

AT STATION NO. 1.

One engine, capacity 5,000,000 gals. in 24 hours, Henry
G. Morris.

One engine, capacity 5,000,000 gals. in 24 hours, Henry
R. Worthington.

One engine, capacity 10,000,000 gals. in 24 hours, Henry
R. Worthington.

One engine, capacity 500,000 gals. in 24 hours, Henry
R. Worthington.

AT STATION NO. 2, TEMPORARY PUMPS.

One engine, capacity 3,000,000 gals. in 24 hours, The Deane Steam Pump Co.

One engine, capacity 3,000,000 gals. in 24 hours, The Deane Steam Pump Co.

AT STATION NO. 3, TEMPORARY PUMPS.

One engine, capacity 3,000,000 gals. in 24 hours, Henry R Worthington.

One engine, capacity 3,000,000 gals. in 24 hours, Henry R. Worthington.

AT STATION NO. 4, TEMPORARY PUMPS.

One engine, capacity 3,000,000 gals. in 24 hours, Knowles Steam Pump Works.

One engine, capacity 3,000,000 gals. in 24 hours, Knowles Steam Pump Works.

2. Description of coal used:

(b) Kind, bituminous.

(c) Size, broken.

(d) Brand, Cumberland.

(e) Price per gross ton delivered, \$3,418.

3. Coal consumed for the year, in pounds, 9,057,728 (1,925,411, Station No 1).

4. Wood consumed for the year, in pounds,

= coal in lbs = 2,400, Station No. 1.

3

5. Total fuel consumed for the year, in pounds, 1,927,811, Station No. 1.

6. Total pumpage for the year, in gallons, 2,452,212,843 (1,120,131,565, Station No. 1).

7. Average static head against which pumps work, 156.33, Station No. 1.
8. Average dynamic head against which pumps work, 163.77, Station No. 1.
9. Number of gallons pumped per pound of coal, 275. (581 Station No. 1.)
10. Duty in foot pounds per 100 pounds of coal, using the following formula, making no deduction for starting or banking fires, or heating building :

$$\text{Duty} = \frac{\text{Gallons pumped (6)} \times 8.34 \text{ (lbs.)} \times 100 \times \text{dynamic head (8)}}{\text{Total fuel consumed (5)}} = 79,360,607, \text{ Station No. 1.}$$

COST OF PUMPING FIGURED ON PUMPING STATION EXPENSES OF \$9,164.19, STATION NO. 1.

11. Per million gallons raised against average dynamic head (8) into reservoir, \$8 18.
12. Per million gallons raised one foot high (dynamic), \$0.05.

Analyses of the water from the several driven well plants have been made each month by the State Board of Health, a record of which is annexed.

An examination of this record will show that the driven well water still maintains the high standard of purity shown by former analyses.

Respectfully submitted,

GEORGE BOWERS,

City Engineer.

COMMONWEALTH OF MASSACHUSETTS.—STATE BOARD OF HEALTH, LOWELL.
WATER ANALYSIS,—Merrimack River.

(PARTS IN 100,000).

No.	DATE OF		APPEARANCE.		ODOR.		RESIDUE ON EVAPORATION.			AMMONIA.			Chlorine.	NITROGEN AS		Hardness.	Iron.	Oxygen Consumed.		
	Collection.	Examination.	Turbidity.	Sediment.	Color.	Cold.	Hot.	Total	Loss on ignition.	Fixed.	Free.	Albuminoid.								
												Total		In solution.	In suspension.					
21,886	Jan., 1898 18 19		Very slight.	Very slight.	0.40	Faintly musty.	Distinctly musty.	3.50	1.60	1.90	.0020	.0146	.0134	.0012	.18	.0080	.0001	1.3	...	.4000
22,227	Feb. 15 16		Slight.	Very slight.	0.40	Faintly musty.	Faintly musty.	3.55	1.35	2.20	.0034	.0132	.0104	.0028	.20	.0070	.0001	0.8	....	.4240
22,534	March 15 16		Decided	Cons., earthy & flocc.	0.41	Faintly musty.	Distinctly musty.	2.50	1.20	1.30	.0012	.0160	.0122	.0038	.12	....	.0001	1.0	....	.4320
22,913	April 20 21		Slight.	Cons.	0.48	Faintly musty.	Faintly musty.	3.05	1.50	1.55	.0022	.0136	.0122	.0014	.15	.0030	....	0.8	....	.5040
23,177	May 17 17		Slight.	Cons.	0.65	None.	Faintly vegetable.	2.95	1.40	1.55	.0014	.0184	.0168	.0016	.15	.0050	....	1.0	..	.5840
23,551	June 14 15		Very slight.	Slight.	0.42	Distinctly musty.	Distinctly musty.	28.65	4.30	24.35	.0038	.0214	.0188	.0026	.23	.0080	.0001	0.8	....	.5040
23,988	July 21 22		Decided	Slight.	0.21	Faintly musty.	Faintly musty.	4.50	1.70	2.80	.0022	.0188	.0156	.0032	.13	.0050	.0002	0.8	....	.3440
24,306	Aug. 16 16		Slight.	Cons.	0.34	Faintly musty.	Distinctly musty.	4.15	1.90	2.25	.0034	.0176	.0156	.0032	.19	.0060	.0002	1.0	...	.4080
24,686	Sept. 20 21		Slight.	Slight.	0.27	Faintly vegetable.	Faintly vegetable.	3.60	1.60	2.00	.0034	.0216	.0168	.0048	.21	.0040	.0002	1.3	....	.3840
25,075	Oct. 18 19		Very slight.	Very slight.	0.60	None.	Very faintly veg. & musty.	4.15	1.90	2.25	.0050	.0218	.0202	.0016	.22	.0020	.0001	1.4	....	.7600
25,378	Nov. 15 16		Slight.	Slight.	0.50	Faintly vegetable.	Distinctly vegetable.	3.25	1.60	1.65	.0014	.0172	.0158	.0014	.14	.0030	....	0.8	....	.7040
25,701	Dec. 20 21		Very slight.	Very slight.	0.36	Very faintly vegetable.	Faintly veg. and mouldy.	3.60	1.45	2.15	.0022	.0138	.0124	.0014	.16	.0070	.0004	0.8	..	.4240

COMMONWEALTH OF MASSACHUSETTS.—STATE BOARD OF HEALTH, LOWELL.
WATER ANALYSIS,—Cook Wells.
(PARTS IN 100,000).

No.	DATE OF		APPEARANCE.			ODOR.		RESIDUE ON EVAPORATION.			AMMONIA.			Chlorine.	NITROGEN AS		Hardness.	Iron.	Consumed. Oxygen.		
	Collection.	Examination.	Turbidity.	Sediment.	Color.	Cold.	Hot.	Total.	Loss on ignition.	Fixed.	Free.	Total.	In solution.		In suspension.	Nitrates.				Nitrites.	
21,887	Jan., 1898	18 19	None.	None.	0.03	None.	None.	9.80	....	....	....	....	.0036	....	....	.64	.0500	.0001	4.7	.0020	.0720
22,228	Feb.	15 16	None.	Very slight.	0.04	None.	None.	9.80	....	....	....	....	.0044	..	....	.63	.0470	....	4.0	.0030	.0800
22,555	March	15 16	Very slight.	Very slight.	0.04	None.	None.	9.10	....	....	.0002	.0036	....	....	....	.62	.0500	....	3.8	.0060	.0950
22,915	April	20 21	None.	Very slight.	0.05	None.	None.	8.80	....	....	....	....	.0024	....	....	.59	.0120	....	3.9	.0040	.1000
23,178	May	17 17	None.	Very slight.	0.08	None.	None.	8.10	....	....	.0004	.0036	....	....	....	.58	.0430	....	3.8	.0060	.0880
23,553	June	14 15	None.	None.	0.04	None.	None.	8.20	....	....	.0004	.0042	....	....	....	.53	.0400	....	3.6	.0050	.1440
23,989	July	20 22	None.	None.	0.09	None.	None.	9.60	....	....	..	.0036	....	....	....	.52	.0420	....	3.5	.0070	.1200
24,307	Aug.	16 16	None.	Very slight.	0.06	None.	None.	9.00	....	....	.0006	.0038	....	....	....	.50	.0320	....	4.2	.0130	.1280
25,380	Nov.	15 16	None.	None.	0.05	None.	None.	8.80	....	....	....	.0048	....	....	....	.48	.0360	....	3.8	.0060	.1200
25,702	Dec.	20 21	None.	Very slight.	0.10	None.	None.	9.00	....	....	....	.0036	....	....	....	.50	.0400	....	3.5	.0040	.1040

COMMONWEALTH OF MASSACHUSETTS.—STATE BOARD OF HEALTH, LOWELL.
WATER ANALYSIS,—Hydraulic Wells.

(PARTS IN 100,000).

No.	DATE OF		APPEARANCE.		ODOR.		RESIDUE ON EVAPORATION.			AMMONIA.			Chlorine.	NITROGEN AS		Hardness.	Iron.	Oxygen Consumed.	
	Collection.	Examination.	Turbidity.	Sediment.	Color.	Cold.	Hot.	Total	Loss on ignition.	Fixed.	Free.	Albuminoid.							
												Total		In solution	In suspension				
21,888	Jan., 1898	18 19	Decided	Cons.	0.30	Faintly earthy.	None.	10.30	....	....	.0086	.0058	....	.38	.0030	.0001	4.7	.0330	.2000
22,229	Feb. 15 16	Decided	Cons. flocculent.	0.20	trid.	None.	None.	9.70	....	....	.0096	.0072	...	.36	.0050	....	3.8	.0300	.2080
23,179	May 17 17	Slight.	Slight.	0.38		None.	None.	8.10	...	....	.0086	.0068	....	.38	.0060	....	3.5	.0470	.2300
23,552	June 14 15	Slight milky.	Slight iron.	0.29		None.	None.	8.30	....	....	.0092	.0074	....	.37	.0040	....	3.4	.0350	.2720
23,991	July 20 22	Decided	Cons.	0.26	fil.	None.	None.	8.70	....	....	.0076	.0066	....	.37	.0060	.0001	2.9	.0500	.2720
24,698	Sept. 20 21	Decided milky.	Cons.	0.28		None.	None.	8.00	....	....	.0096	.0084	....	.35	.0070	.0001	3.1	.0570	.2720
25,076	Oct. 18 19	Slight milky.	Very slight.	0.28		None.	None.	8.40	....	....	.0092	.0086	...	.33	.0030	.0001	3.6	.0480	.3040

COMMONWEALTH OF MASSACHUSETTS.—STATE BOARD OF HEALTH, LOWELL.
WATER ANALYSIS,—Boulevard Wells.

(PARTS IN 100,000).

No.	DATE OF		APPEARANCE.			ODOR.		RESIDUE ON EVAPORATION.			AMMONIA.				NITROGEN AS		Hardness.	Iron.	Consumed Oxygen.
	Collection.	Examination.	Turbidity.	Sediment.	Color.	Cold.	Hot.	Total.	Loss on ignition.	Fixed.	Free.	Albuminoid.		Chlorine.	Nitrates.	Nitrites.			
												In solution.	In suspension.						
21,889	Jan., 1898	19	Very slight.	Very slight.	0.08	None.	None.	4.50	....	....	.0104	.0020	....	.27	.0180	.0001	2.3	.0140	.0440
22,230	Feb., 15	16	Very slight.	Slight iron.	0.15	None.	None.	4.20	...	....	.0102	.0032	....	.26	.0230	....	2.3	.0200	.0480
22,556	March 15	16	None.	Very slight.	0.11	None.	None.	4.40	....	..	.0116	.0018	....	.28	.0430	....	2.1	.0400	.0400
22,914	April 20	21	Slight.	Cons. iron.	0.06	None.	None.	4.50	...	....	.0118	.0018	....	.26	.0200	....	1.8	.0350	.0560
23,554	June 14	15	Very slight.	None.	0.10	None.	None.	4.70	....	....	.0148	.0014	....	.29	.0380	....	2.0	.0160	.0400
23,990	July 21	22	Slight.	Slight.	0.16	None.	None.	4.30	....	....	.0100	.0032	....	.25	.0270	....	1.8	.0400	.0360
24,308	Aug. 16	16	Slight milky.	Slight.	0.14	None.	None.	4.60	....	....	.0038	.0030	....	.27	.0250	.0001	1.4	.0280	.0360
24,679	Sept. 20	21	Slight milky.	Slight.	0.17	None.	None.	4.50	....	....	.0102	.0040	....	.25	.0150	.0002	1.4	.0460	.0880
25,077	Oct. 18	19	V. slight milky.	Very slight brown flocks.	0.12	None.	None.	4.50	....	....	.0084	.0054	....	.29	.0160	.0001	1.7	.0360	.1280
25,381	Nov. 15	16	Slight.	Slight.	0.17	None.	None.	3.80	....	....	.0070	.0046	....	.25	.0120	....	1.8	.0280	.1040
25,703	Dec. 20	21	Slight.	Cons. and flocculent and iron.	0.20	None.	None.	4.70	....	....	.0112	.0028	....	.27	.0350	....	2.0	.0380	.1040

ANNUAL REPORT
OF THE
OVERSEERS OF THE POOR
FOR THE
CITY OF LOWELL,
WITH ACCOMPANYING PAPERS,
FOR MUNICIPAL YEAR, 1898.



LOWELL, MASS.:
LOWELL SUN PRINT, SUN BUILDING
1899.

Board of Overseers of the Poor,

LOWELL, MASS., 1899.

Ward 1—SAMUEL HOLGATE	46 Bowditch Street
Ward 2—THOMAS MAHONEY.....	137 Colburn Street
Ward 3—HORACE ELA	407 Walker Street
Ward 4—JAMES E. GORMAN	384 Gorham Street
Ward 5—JEREMIAH McGLINCHEY.....	438 Central Street
Ward 6—AMOS B. LEIGHTON	949 Bridge Street
Ward 7—JAMES McKINLEY, Chairman..	24 West Meadow Rd.
Ward 8—HENRY J. WILLIAMS	354 Pine Street
Ward 9—HERBERT V. HUNT	116 Fort Hill Avenue

Secretary and Superintendent of Out-Door Poor.

MARTIN J. COURTNEY 26 Ames Street

Office: City Hall. Hours: 9 A. M. to 4 P. M.

Superintendent of In-Door Poor and Master of Workhouse.

MOSES WYMAN.....Office and Residence: City Farm

City Dispensary.

AUSTIN KEITH, Clerk.....City Hall

Dispensary Hours: From 9 A. M. to 5 P. M.

*To His Honor the Mayor and the Honorables the
Members of the City Council of the City of
Lowell, Mass.*

GENTLEMEN:—In accordance with the provisions of the charter of the City of Lowell I hereby present the following as the report of the Overseers of the Poor department for the fiscal year ending December 31, 1898.

JAMES McKINLEY *Chairman,*

For the Overseers of the Poor.

REPORT OF THE SECRETARY
OF THE
OVERSEERS OF THE POOR.

*Mr. Chairman and Gentlemen of the Overseers of
the Poor:*

In accordance with the rules of the board I have the honor to present herewith my report as Secretary and Superintendent of Out Door Relief for the fiscal year 1898.

Owing to the changes brought about by the incoming of the new charter the report is delayed, as it was impossible to get the figures in time for the last regular meeting in December, as called for by your rules.

The business of the Department for the past year has been heavy. The amount expended will be a trifle higher than that of the previous year.

There does not seem to be any cessation with us and the present year promises now to be larger than ever. The growth of the Pauper Department is really alarming. It more than keeps pace with the increase of population, and has more than doubled in twenty years.

The expenses of 1898 are a little less than \$20,000 more than those of 1888, and over \$46,000 more than in 1878. The same ratio of increase is true of almost every other city and town in the Commonwealth. It cannot be the fault of any individual place, as the increase is universal.

Never in the history of the Department was more economy exercised than last year. The output represents the absolute necessities and imperative demands of the Department. I don't know of any branch wherein any money was wasted. Still the amount expended is more than \$1.00 per capita of population; an amount too high for a well-regulated municipality. We go on aiding and supporting dependent people in accordance with the provisions of the pauper laws of the state, and the close of each year finds an increased expenditure and volume of business over that of its predecessors.

In our city the mills have been running fairly well as a general thing, some of them working over-time. Yet, there are thousands of able-bodied men daily seeking employment.

The Savings Banks Commissioner's report shows that in 1898 there was more money deposited and more depositors than in any other one year in the history of the state. Still, the pauper business has materially increased all over. Never were the demands so numerous, and never were the applicants more worthy than during the past year. Of course, there is a large number of the unworthy; but, as a general rule, the percentage of worthy applicants outstrips the unworthy. The number of people who come and go through the office of the pauper officials in a year is simply astounding. It is not even imagined by those not in contact with the business of the Department. Want and distress overtake hundreds each year who have no other recourse than the Pauper Department, and once they are in the clutches of that incubus it is hard for them to ever get away.

Some will say that it is the fault of the people themselves that they are reduced to the necessity of pauperism. In a great many cases I agree with them; it is undoubtedly due to shiftlessness, laziness and intemperance that many are brought to the public manger, but it is not true of all. Many an industrious man and woman have been compelled to make application for aid during the past two or three years who loathe to do so. Go around Lowell on any day in the week and see

the number of able-bodied, sober-faced men you will find loafing on the street corners. Put in an advertisement in any of the local papers to hire fifty men to work and your place of business will be over-run with thousands of applicants.

Last April this Board made it a rule to compel able-bodied heads of families to work at the rate of \$1.00 per day and their dinner for the aid given. That rule has been lived up to pretty well, still it has not shown any decrease in the business. Of course there were many of our chronic customers who strenuously objected to that rule, and we lost their trade. But that number was a very insignificant one. The great majority were not only willing to go to the wood-yard and do the work, but many of them were anxious to go two and even three times per month for a second and a third order, where they were accustomed to get but one order a month before. In all we have sent over two hundred different men to work there, and many of them were those to whom I thought work was an insult.

What does this show, gentlemen? To my mind it simply shows this: that one of the necessary preventatives to pauperism is an open labor market. Give the man a chance to labor and he will keep himself and family off the pauper lists. The inability to sell his labor makes the poor working man a pauper. There is no sense nor

justice in the claim that they will not work if they get it. They will work and are anxious to get it, and one of the absolute needs of the future is the supplying of that work. It is a daily occurrence in our office to have men ask for any kind of work at a rate of wages sufficient only to keep away absolute want from himself and family.

Times and times over I have had men to whom "going on the town" was as repulsive as it ever was to our forefathers, compelled to swallow that noble sentiment, after fighting for weeks to keep away, simply because they could find no work to do.

The question of the hour is, "How to decrease pauperism?" And to my mind one of the very surest ways is to provide work for all who are willing and able to do it. It will have to come in time that municipalities will have to furnish a market for labor when the private industries are not sufficient to meet the demands of all.

The amount of wood, coal and provisions disbursed last year was, approximately, the same as the year previous. The number of unworthy recipients, is, as usual, very large. They are the most persistent applicants and the most ungrateful. The more unworthy they are, the most insistent. They are the chronic cases, and never attempt to become self-supporting. The only times they are

missed is when in jail, and in nine cases out of ten the almshouse branch of the pauper department is burdened with the full support of their families. In no city in the state could a first-class "slum Angel" find a more fertile field for her labors than right here in Lowell.

Our generous residents who annually contribute large sums to civilize the natives of Baribahoo Gha or some other outlandish place could work infinitely more good by contributing to a home fund to improve the unfortunates of their own city. No foreign mission contains more neglected subjects, nor subjects more in need of wholesome influences. But these subjects are not a part of the lives of your philanthropist. They are a part and parcel of the daily work of the pauper and police officials. Your philanthropist can mail a good sized check to help the natives of some country that is never heard of only through foreign missions, and when that is done he feels that he has done his duty. But he cannot take the trouble to see the needs of civilization right in his midst. He cannot find time to visit the haunts of poverty and vice and witness a condition of things that he never even dreamed of as being so bad. He cannot go to the foul smelling, dirty hovels which, unkempt men and bedraggled women, with a lot of skeleton-faced, wistful-eyed children, call home, and see for him-

self where the coming generation of paupers and criminals are to be recruited from. No, that is for the police and pauper department to do, and his duty as a citizen does not require of him to bother about such things.

How many private charities are there in this city? Here we are, a city of almost 100,000 inhabitants, prosperous and law abiding, so busy in the accumulation of wealth, that we have not the time to dispense any charity except that which is given by the city and is smirched with the odium of pauperism.

Of course there are a few private charitable organizations, but they are all woefully in want of money. The Ministry at Large, so ably and intelligently handled by Rev. George Wright, does more in a general way than any other, the others as a general thing being confined to certain limits. Still that association is, as I understand it, handicapped for want of money. We have no trust funds, nor legacies left to care for the worthy poor, and all such have to come on the city. It would seem probable that in a city of our size there would be some offerings that would be of benefit to the poor.

When that so-called "Slumming" was quite the proper thing among the rich and comfortable of our larger cities I had great hopes that it would be taken up here in Lowell. I felt that if many

of our people, who are unacquainted with the scenes of poverty and its attending evils, could see for themselves just how people in their own city exist from day to day, the lesson would be a valuable one. I know that such a knowledge would prompt acts calculated to alleviate and improve. It is on this account that I have spoken of this subject, hoping that the year 1899 will be the beginning of many organizations, whose mission will be to dispense worthy charity to those brought down by want.

In the compilation of the statistical portion of the yearly report this year, some difficulty is found. The past was the first year under the workings of the new charter. Under it each year is supposed to stand by itself, and bills contracted the year previous are not to be paid out of the current year's appropriation. As a result, all of the bills of 1897 remaining unpaid January 1st, 1898, were met by the passage of a special draft and do not show on this year's bills. This theory may be feasible and all right, but it does not seem practicable, in this department. Everything would be all right if the bills against the department were presented, before the first of the year, but such is never the case. The quarters in the insane and other hospitals do not end until December 31st, and the bills cannot be rendered until some days afterward. This makes the appropriation pay for but

three quarters of the year, the other quarter being paid by special draft, the following year. This makes considerable confusion, and in making my tables I have shown, as far as possible, the year's actual business.

One feature of our charter that is not relished by this office, is that by which all receipts are credited to the General Treasury Fund. Of course the theory of this is that that fund receives all of the receipts and that it really does not make any material difference, as the city gets the money anyway. While it is undoubtedly true that the city gets the money, still, to my mind it is not as desirable, nor as fair to the departments as heretofore.

It certainly is not as conducive to large receipts as the old method of crediting each department with its own receipts. If the financial condition of the city was such as would allow the yearly appropriations for the different departments to be sufficient to meet the expenses of each year, then there might be some excuse for the existence of a General Treasury Fund. But when that is not the case, and the amount allowable, without each having the credit of its own receipts, is not sufficient to go much further than ten months in the year, the injustice of the General Treasury Fund is apparent.

Where we fare badly in this is in assistance given to all, other than Lowell cases. For all such reimbursements are received and they really do not cost this city anything. Still, under the General Treasury Fund arrangement this output is direct from the pauper appropriation and the receipts do not go to our credit. If we give John Jones, a Worcester case, \$5.00 worth of aid, that amount is paid by the Overseers of the Poor department of Worcester; still it is paid out of our appropriation, and we do not get any credit for the reimbursement. This, to my way of thinking is not right and steps should be taken to make a change.

In the institution part of the expense there is an increase. While the sick expense shows a falling off all along the line the increase in the cost of the care of the insane has been considerable. Each year finds the cost of caring for the insane growing as the total number is steadily on the gain. Statistics show that insanity in our state has more than trebled in twenty years and our city has kept pace with that increase. We are powerless to controvert this expense, and must patiently wait for the passing of such laws as will place the care of all the insane upon the Commonwealth.

In regard to the ambulance service, I desire to say a few words. Some strictures has been made

on that service on account of the failure of the ambulance to get to three cases quite as quickly as was desired. The fact that fault was found goes but to show the place in the public mind the ambulance service has taken. In all, the ambulances responded to 926 calls last year, and it is considerably to the credit of that service that fault could not be found but in three instances. In those cases, while the delay was a source of great regret to all concerned, still, it was impossible to have escaped it and was just as likely to occur under any new system inaugurated.

At present, as you know, there are employed on the ambulance three drivers. They are experienced men and can render such "first assistance to the sick and wounded" as is desired in most cases. Two drivers are on duty during the day and one at night. In each of the three cases alluded to it happened that they came in when the other calls were being attended to. This is just as likely to happen with more drivers and more ambulances.

The calls cannot be regulated, and both drivers are apt to be out attending to them when a third call would come in. In every call the ambulance physician is in attendance. Dr. Burnham is a pains-taking capable official, whose quiet, unassuming manner and thorough, satisfactory work commends him to all with whom he comes in contact.

During the early part of this year the Board was called upon to mourn the loss of our Ambulance Physician, Dr. Charles H. Ricker, also a member of the Dispensary staff.

In his death we lost a faithful official. From the beginning of the ambulance service until his death he was the ambulance surgeon, and took the most active interest. He was faithfulness itself, and cheerfully responded to the most onerous calls. As a member of the dispensary staff his work was of inestimable value. The poor of our city lost one of their best friends, and his memory will be ever green to them.

The Board took official notice of his death by passing appropriate resolutions, closing the office on the day of the funeral, and attending the funeral in a body.

Apropos to the care of delirium tremens cases at present agitating the public mind. Each morning in the week I call at the police station, and if there is a case of tremens there I am immediately notified. The patient is immediately sent to the farm and put under treatment and careful surveillance. During the past year the superintendent has had twenty-seven such cases sent by me from the police station. They were in all different phases of the disease, and the fact that not a single death occurred speaks volumes for the

care shown. Of course deaths are likely to occur even with the best of care, such as we give, but careful, intelligent attention will prevent such in almost every case.

In conclusion, I have but a few recommendations. As you all well know, I am strongly in favor of separating the Out Door and Almshouse branches of the Department. They have nothing in common and should be separated. The location of the base of supplies for the Out Door Relief is too remote when located at the farm, and much valuable time is lost. At present we cannot begin to keep up with the orders. There is plenty of available room at the ambulance yard to establish a "City Store" and locate the wood yard, and the cost of maintaining such would be but little in comparison to the benefit derived.

The increasing demands of the office will necessitate the employment of an extra clerk. It is simply impossible to do justice to the department and its clients with the present force.

Last evening, before the orders were made out for today, there were eighty-four applicants for aid alone, besides the other out-of-town and state notices to be attended to.

I would also recommend a more active interest in the demands of the applicants by the members of the Board. Each member should familiarize

himself with the applicants of his ward and keep in touch with them. In that way he could be of invaluable assistance to the office and would prevent imposition in a great many cases.

Out-Door Relief for 1898.

Secretary's office	\$ 4,205 35
Cash allowances	2,665 76
Provisions, etc., both on orders and from Almshouse..	13,690 53
Ambulance	3,912 41
Dispensary	1,384 06
Physicians	1,353 53
Coffins, Interments, etc	846 00
Commonwealth of Massachusetts	2,315 34
Hospitals, Institutions, and Asylums	13,827 77
Cities and Towns	1,638 39
Sundries	131 92
	<hr/>
	\$45,971 06
Bills of 1897 paid by special draft	6,055 83
	<hr/>
	\$52,026 89
Transferred to General Treasury Fund	39 84
	<hr/>
	\$52,066 73

CREDIT.

Appropriation	\$35,000 00
Special draft	6,055 83
Receipts	10 90
Additional appropriation.. . . .	11,000 00
	<hr/>
	\$52,066 73

Dispensary.

Salary of clerk—\$17 per week.....	\$901 00
Medicines and drugs	483 00
	<hr/>
	\$1,384 06

Business of the Dispensary.

Total number of prescriptions compounded.....	6,959
Patients treated in dispensary.....	1,279
Patients treated at their homes by Ward Physicians....	897
Prescriptions compounded for cases treated by outside doctors	106
Out of town cases and medicines furnished by dispensary doctors	\$160 30

Ambulance.

Salary of three drivers—\$15 per week each	\$2,385 00
Care of four horses, harness, etc., for one year	438 25
Telephones and sundries, for one year	552 91
Salary of Almshouse surgeon	536 25
	<hr/>
	\$3,912 41

NUMBER OF CALLS DURING 1898.

	SICK	ACCIDENT	NOT USED
January	45	21	27
February	35	21	7
March	41	28	15
April	38	16	5
May	48	21	5
June	38	22	7
July	41	35	7
August	41	30	7
September	51	28	6
October	55	14	7
November	54	20	3
December	60	23	4
	<hr/>	<hr/>	<hr/>
	547	279	100

Total number of calls, 926.

COST OF SUPPORTING LOWELL'S SICK POOR IN HOSPITALS IN CITY FOR 1898.

	St. John's Hospital.		Lowell General Hospital.		Lowell Hospital Asso.		Total.
	City Cases.	State, City and Town Cases.	City Cases.	State, City and Town Cases.	City Cases.	State, City and Town Cases.	
January	\$208 00	\$ 17 00					\$225 00
February	200 50	55 01					255 51
March	176 50	180 69					357 19
April	191 50	181 72	\$ 6 00		\$25 29	\$18 00	422 51
May	128 50	74 84					203 34
June	181 00	58 14					239 14
July	169 50	65 28	53 50	\$10 70			298 98
August	151 00	58 71			25 00		244 71
September	154 50	61 86		10 00			226 36
October	165 00	123 85	25 00			20 00	333 85
November	184 50	74 00					258 50
December's bill unpaid	228 00	68 85	24 50		30 00		351 35
Total	\$2,138 50	\$1,019 45	\$109 00	\$20 70	\$90 29	\$38 00	\$3,415 94

*Amounts Paid Cities and Towns**On Account of Lowell's Paupers Residing Therein.*

CITIES.		TOWNS.	
Boston	\$381 09	Andover	\$ 6 00
Beverly	146 00	Billerica	73 19
Cambridge	2 70	Chelmsford	61 85
Chelsea	3 00	Methuen	23 25
Everett	10 00	Orange	3 84
Fall River	12 58	Saugus	15 00
Fitchburg	78 58	Wareham	13 75
Lawrence	86 65	Watertown	18 30
Lynn	102 90	Westford	40 50
Malden	133 79		
North Adams	16 74		\$255 68
Newton	20 00		
Salem	94 97		
Somerville	73 15		
Springfield	106 00		
Waltham	12 81		
Worcester	101 75		
	<hr/>		
	\$1382 71		

Total expended \$1638.39.

Cost of Supporting Lowell's Insane at State Asylums During 1898.

Institution.	Rate per week	Total Expended.	Total Amount Due.	Number during year 1898.	Number remaining Jan. 1, 1899.	Number during year 1897.	Number remaining Jan. 1, 1898.
Worcester Insane Hospital.....	\$3 25	\$4,188 40	\$1,150 99	59	31	33	25
Danvers Insane Hospital.....	3 25	2,021 96	630 04	17	15	14	13
Taunton Insane Hospital.....	3 25	134 82	.....	1	0	1	0
Westboro Insane Hospital.....	3 25	369 96	85 42	4	2	5	
Northampton Insane Hospital.....	3 25	70 11	.....	1	1	1	1
Medfield Asylum.....	2 80	2,115 85	809 60	23	19	18	18
Worcester Asylum.....	2 80	380 24	128 14	3	3	3	3
State Farm, Bridgewater.....	2 80	873 60	200 26	8	8	8	8
State Almshouse, Tewksbury.....	2 80	353 46	110 40	3	3	3	3
Totals.....		\$10,547 40	\$3,114 85	110	82	86	74

Total expense for year,..... \$13,662 25

Less amount received for board of sundry persons, 1,037 45

Expense for 1897,..... \$11,453 99

Less amount received,..... 859 29

\$12,574 80

\$10,594 70

Amounts Paid for Lowell's Dependent Children.

Institutions.	Rate.	Amount.	Amount due.	Number during 1898.	Remaining Jan. 1, 1899.
St. Peter's Orphan Asylum, Lowell.....	\$1 25	\$851 93	\$ 78 12	15	15
Lawrence Orphan Asylum	1 25	74 22	12 00	3	1
Salem Orphan Asylum.....	1 50	278 57	114 00	5	5
Perkins Institute for Blind.....	....	47 30	.....	2	2
Mass. School for Epileptics.....	3 25	113 75	85 43	2	2
Mass. Hospital for Children.....	3 25	126 74	42 71	1	1
Mass. School for Feeble Minded.....	3 25	758 14	256 26	6	6
Boston Children Aid Society.....	2 00	88 23	12 00	1	1
Total		\$2,338 88	\$600 52	35	33
Total cost, \$2,939.40.					

RECORD OF AID FURNISHED FROM JAN. 1, 1898, TO JAN. 1, 1899.

1898.	Lowell Cases.				State, Cities and Towns.				Totals.			
	Males.	Females.	Wood.	Coal.	Prov'ions	Orders.	Males.	Females.	Wood.	Coal.	Prov'ions	Orders.
									Number assisted.			
January	538	720	\$184 75	\$344 38	\$696 62	\$78 00	253	277	\$55 25	\$110 64	\$225 38	\$32 00
February	535	704	169 34	322 03	641 90	84 50	232	244	53 16	106 47	215 00	31 50
March	544	707	207 12	309 75	703 78	84 00	231	247	55 38	97 25	208 22	31 50
April.....	386	577	280 83	.....	555 61	96 00	137	183	75 17	.....	154 39	38 11
May	372	507	265 17	.....	513 70	106 50	147	138	65 83	.....	133 30	37 59
June	318	457	241 98	.....	478 34	106 50	132	133	69 02	.....	126 66	31 00
July.....	397	438	212 87	.....	422 72	105 00	65	81	32 13	.....	73 28	25 00
August.....	314	457	237 87	.....	456 72	115 00	89	90	35 13	.....	80 28	25 50
September	314	437	223 45	.....	443 54	131 50	58	8	31 55	.....	69 46	22 50
October	313	525	257 27	.....	495 51	110 65	102	112	44 73	.....	93 49	25 50
November	342	543	250 82	.....	513 63	101 50	88	94	41 18	.....	83 37	45 00
December.....	587	690	186 29	323 74	674 12	120 75	150	164	49 73	67 26	155 88	32 00
Total.....	4870	6792	\$2727 76	\$1299 88	\$6598 20	1209 90	1673	1881	\$600 26	\$381 62	\$1,021 71	\$377 11
											\$3,328 00	\$1,681 50
											\$8,220 00	\$1,587 01

Totals of Out-Door Aid from January 1, 1898, to January 1, 1899.

	Wood.	Coal.	Provisions.	Orders.	Total, 1899.	Total, 1898.
January	\$240 00	\$455 00	\$922 00	\$110 00	\$1,727 00	\$1,763 50
February	222 50	428 50	856 00	116 00	1,623 00	1,729 75
March	263 50	407 00	912 00	115 50	1,698 00	1,678 00
April	356 00	.	710 00	134 11	1,200 11	1,159 50
May	331 00	.	650 00	144 00	1,125 00	961 50
June	302 00	.	605 00	137 50	1,044 50	967 00
July	245 00	.	496 00	130 00	871 00	950 00
August	273 00	.	537 00	140 50	950 00	889 50
September	255 00	.	516 00	124 00	895 00	967 00
October	302 00	.	589 00	136 15	1,027 15	936 50
November	302 00	.	597 00	146 50	1,045 50	1,046 50
December	236 00	391 00	830 00	152 75	1,609 75	1,622 25
	\$3,328 00	\$1,681 50	\$8,220 00	\$1,587 01	\$14,816 51	\$14,681 00

Monthly Cash Output Including Pay Rolls, Jan. 1, 1898, to Jan. 1, 1899.

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total.
Ambulance	\$315 54	\$304 34	\$223 73	\$302 40	\$262 06	\$273 14	\$340 96	\$327 29	\$474 98	\$225 00	\$180 00	\$502 97	\$3,912 41
Orders on Stores	76 50	100 01	128 99	132 83	126 50	82 36	165 94	152 06	91 50	152 15	.....	213 25	1,432 00
Orders from Almshouse .....	.....	.....	.....	.....	7,399 50	840 00	483 00	1,029 00	.....	.....	.....	2,507 00	13,258 53
Cash Allowances	211 58	194 50	198 58	192 93	222 65	218 43	242 65	245 25	245 64	243 22	215 64	234 72	2,665 76
Secretary's Office	350 58	316 06	397 62	364 24	324 83	388 86	365 35	334 38	329 43	327 13	277 04	429 83	4,265 35
Sundries	12 84	17 89	10 39	18 09	7 14	7 24	21 52	5 79	9 74	.....	.....	21 28	131 92
Cities and Towns	7 64	18 32	16 10	131 52	82 35	120 24	361 14	389 77	30 97	.....	.....	480 34	1,638 39
Hospitals	308 70	361 11	3,345 97	555 29	346 32	3,021 54	375 92	321 67	461 63	.....	.. ...	4,730 21	13,827 77
Commonwealth .....	.....	.....	.....	.....	942 53	.....	.....	.....	.....	.....	.....	1,372 81	2,315 34
Coffins and Interments, .....	.....	23 00	290 50	35 00	67 00	11 00	70 00	238 50	59 00	.....	.....	52 00	846 00
Physicians	127 97	104 97	101 96	144 90	141 96	127 96	120 96	66 64	150 64	.....	.....	260 57	1,353 53
Dispensary	93 85	75 80	93 82	135 50	79 35	71 00	239 35	106 95	177 48	85 00	68 00	157 96	1,384 06
	\$1,505 20	\$1,606 00	\$4,807 66	\$2,122 70	\$10,002 19	\$5,161 77	\$2,786 80	\$3,207 21	\$2,035 41	\$1,032 50	\$740 68	\$10,962 94	\$45,971 06
Receipts	\$414 68	\$336 33	\$141 04	\$180 31	\$378 77	\$1,614 44	\$407 40	\$609 91	\$127 00	\$28 25	\$391 23	\$812 93	\$5,442 29

FINANCIAL STATEMENT

Of Pauper Dept., Almshouse and Out-Door Relief, 1898.

CREDIT.

Appropriation :

Almshouse	\$45,000 00
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Out Door Relief	35,000 00
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Drafts for 1897 bills:

Out Door Relief.....	6,055 83
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Almshouse.....	2,151 34
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Receipts.....	573 91
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Almshouse—for wood, coal and provision to Out door Relief.....	12,258 50
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Additional Appropriation to Out Door Relief.....	11,000 00
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Gross Credit	\$112,039 58
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EXPENDITURES.

Out Door Relief—including cash paid Almshouse ..	\$45,971 06
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Almshouse—for Almshouse proper..	42,443 69
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Almshouse—for Out Door Relief	12 258 50
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Drafts for 1897 bills:

Out Door Relief	6,055 83
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Almshouse	2,151 34
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Total Gross of Pauper Dep't.....	\$108,880 42
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Transferred to G. T. Fund.....	3,159 16
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Gross Debit	\$112,039 58
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Gross Debit.....	\$112,039 58
Cr. by Out Door Relief Orders, charged to both...	12,258 50
	<hr/>
	\$99,781 08
Cr. by amount transferred to G. T. Fund....	3,159 16
	<hr/>
Total Gross Cost of Department, 1893.....	\$96,621 92
Total Gross Expense	\$96,621 92
Credit by Receipts during 1898:	
Out Door Relief.....	\$5,442 29
Almshouse.....	2,569 32
	<hr/>
	8,011 61
	<hr/>
	\$88,610 31
Actual Cost of Supporting Lowell's Poor for the	
Year 1898.....	\$88,610 31

Respectfully submitted,

M. J. COURTNEY,

Secretary.

REPORT
OF
INSTITUTIONS AT CITY FARM,
LOWELL, MASS.
FOR THE YEAR 1898

Superintendent's Report.

CITY FARM, January 2, 1899.

To the Board of Overseers of Poor:

GENTLEMEN: I present herewith my report as Superintendent of the City Farm from December 21, 1897, to December 31, 1898.

APPROPRIATION.

This was the first year that separate appropriations were given the Out Door Relief and the Almshouse. The amount given the Almshouse, \$45,000, has not been exceeded, but a balance of about \$4,000 left.

Wood Yard bills and pay roll were paid from this appropriation.

The amount \$13,649 was charged the Out Door Relief Department for provision, wood and coal orders delivered to Out Door poor.

The following shows the separate amounts of expense and credit:

Expenses of Almshouse.....	\$40,202 90	
Pay Roll of Almshouse	11,154 26	
Expenses of Wood Yard.....	2,003 56	
Pay Roll of Wood Yard.....	1,217 71	
	<hr/>	\$54,578 43
Provision Orders Delivered.....	\$8,434 00	
Wood and Coal Delivered.....	5,215 00	
Wood to City Departments.....	610 56	
	<hr/>	\$14,259 56
	<hr/>	<hr/>
Cost of Almshouse and Wood Yard...		\$40,318 87

REPAIRS.

No repairs of importance have been made during the year.

Improved and enlarged bathing accommodations are needed badly, also shower baths for Insane Departments.

The Laundry Building needs repairs; a new floor is wanted in the washing room.

The ventilation should be improved in Nursery and Hospital.

Shop and shed room should be built as planned over piggery, as present accommodations are not sufficient for the needs of the place.

In fact, very much needs to be done to have the place stand where it should among other institutions of the same kind.

INMATES.

The daily average has been larger than before. Last year the average was 417; this year 443.

The number was especially high in February, and wishing to know how many inmates some other cities were supporting, I secured the following information February 1:

Worcester,	205.
Springfield,	190.
Lawrence,	150.
Fall River,	117.
New Bedford,	95.

The daily average for Lowell for the month of February was 534, which includes insane and prisoners. Deducting 105 for insane and 75 for prisoners, the number which Lowell supports is much too large and out of proportion to population.

WOOD YARD.

There have been many arguments in regard to the proper place for the Wood Yard, so I have compared the cost for the last three years at the Farm with the years 1893, '94, '95, the last three years it was at Broadway.

A careful study of the figures will show that the increase in the number of orders in the past

three years has been 3733 over the last years at Broadway, and yet the expenses have decreased \$5,938.23. In other words the cost of delivering an order from the Farm is \$1.63; from Broadway \$3.16.

The amount given on each order varies from \$1.00 to \$1.50 or \$2.00. The greatest number is issued for \$1.50.

The 'greatest saving at the Farm is in the pay roll, for when at Broadway the weekly pay roll has been as high as \$110.00, while at the Farm it has never been over \$27.60, and at present is \$22.00, which amount it should not exceed, as two drivers are sufficient.

All the wood is sawed by tramps and split by inmates, each tramp sawing one-eighth of a cord.

The following are the items:

	1893	1894	1895
Labor	\$3,597 26	\$3,992 75	\$4,556 13
Wood	2,156 53	1,340 46	1,326 62
Coal	1,090 83	1,817 14	1,369 00
Other Expenses	972 33	1,589 70	1,252 86
	<hr/>	<hr/>	<hr/>
	\$7,816 95	\$8,740 06	\$8,404 61
Number of Orders.....	2,175	2,960	2,769
Number of orders for three years....			7,904
Their cost....			\$24,961 62
Single order cost			\$3 16.

	1896	1897	1898
Labor	\$ 922 32	\$1,435 20	\$1,217 71
Wood	315 00	4,370 22	1,034 72
Coal.....	1,844 15	3,911 12	853 59
Other Expenses.....	1,234 41	1,121 70	763 25
	<hr/>	<hr/>	<hr/>
	\$4,315 88	\$10,838 24	\$3,869 27
Number of Orders	3,160	4,199	4,278
Number of orders for three years			11,637
Their cost.....			\$19,023 39
Single order cost.....			1 63

MEN WORKING FOR AID.

By vote of the Board men applying to the Secretary for aid who were out of work were required to work at the Farm. For a \$2.00 provision order and \$1.00 worth of wood, each was to work three days and receive his dinner at the Farm.

Some other arrangement should be made, as the men have a chance to mingle with the paupers and prisoners and can bring to them or carry away.

No charge was made to the Out Door Department for orders delivered for which men worked.

FARM PRODUCTS.

The usual amount of farm produce was raised. Much was used in the Institutions and the sur-

plus was sold, the receipts going to the general treasury fund.

The principal amounts raised were:

English hay, 110 tons; Potatoes, 882 bushels; Onions, 182 bushels; Rye, 88 bushels; Turnips, 306 bushels; Beets, 244 bushels; Squash, 20,000 lbs.; Carrots, 3835 lbs.; Pork, dressed, 13,295 lbs.

The report on Almshouse, Workhouse and Expenses will be found in the following pages.

Respectfully submitted,

ALBERT PINDAR.

Superintendent.

ALMSHOUSE 1898.

	Males.	Females.	Total.
Remaining Dec 20, 1897.....	175	249	424
Admitted, including births.....	316	310	626
Discharged, including deaths.....	325	321	646
Number supported.....	491	559	1,050
Births	5	7	12
Deaths	39	54	93
Remaining December, 31, 1898.....	166	238	404
Tramps, Dec. 20, '97 to Dec. 31, '98..			2,130

WORKHOUSE, 1898.

	Males.	Females.	Total.
Remaining Dec. 20, 1897.....	28	31	59
Committed	103	120	223
Whole number.....	131	151	282
Discharged	104	115	219
Remaining Dec. 31, 1898.....	27	36	63
Total number supported during year..			1332
Daily average.....			443

ALMSHOUSE EXPENSES, 1898.

Monthly Bills.....	\$40,202 90
Pay Roll	11,154 26
Coal and provisions on hand Dec. 20, '97...	5,090 05
	<hr/>
	\$56,447 21
Provisions delivered.....	\$8,434 00
Board of wood men, and horses.....	648 00
Supplies on hand Dec. 31.....	4,875 00
	<hr/>
	13,957 00
	<hr/>
	\$42,490 21
Number of inmates per day.....	443
Cost per inmate per week.....	\$1 77½

WOOD YARD, 1898.

Pay Roll.....	\$1,217 71
Board of men and horses.....	648 00
Other expenses.....	2,003 56
Supplies on hand Dec. 31, 1898.....	4,334 60
	<hr/>
	\$8,203 87
Delivered to out door poor.....	\$5,215 00
Delivered to other departments.....	610 56
Supplies on hand Dec. 31, '98.....	2,957 00

ANNUAL REPORT

OF THE

Births, Marriages and Deaths

IN THE

CITY OF LOWELL,

FOR THE YEAR 1898.



LOWELL, MASS.:
LOWELL SUN PRINT, SUN BUILDING,
1899.

REPORT.

CITY OF LOWELL,
CITY CLERK'S OFFICE, March 28, 1899. }

*To the Honorable the Mayor and City Council of the
City of Lowell:*

GENTLEMEN:—The Annual Report of Births, Marriages and Deaths for the year 1898, as of record in the office of the City Clerk, is herewith submitted.

BIRTHS.

The total number of births returned and recorded for the year 1898 was 2,422. Of these eight, two males and six females, were returned and recorded as having been born out of Lowell, their parents being residents of Lowell, and temporarily residing in the city or town where the birth occurred.

Eleven, four males and seven females, were returned and recorded as born of parents temporarily residing in Lowell.

BIRTHS BY WARDS.

Ward	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Total
Whole Number.....	140	328	241	238	264	273	554	181	181	2400
Males.....	69	172	130	117	138	146	266	87	101	1226
Females.....	71	156	111	121	126	127	288	94	80	1174
American Parents.....	27	34	60	49	45	46	55	70	42	428
Foreign Parents.....	95	249	125	146	165	175	418	77	98	1548
American Father, Foreign Mother.....	9	24	31	21	34	23	34	15	22	213
Foreign Father, American Mother.....	9	21	25	22	20	28	47	15	18	205
Parents' Nationality unknown.....						1		4	1	6
Twins.....	1	4	1	2	3	2	4	1		18
Illegitimate.....		1	1		3			*8		13

Still Births, not included in above, 145.

* Born at City Farm.

Ward unknown, 3; females 3.

Decrease from 1897, 200.

MARRIAGES.

The number of intentions of marriage issued in 1898 was 960, 11 less than in 1897.

The number of marriages recorded in 1898 was 962, 1 less than in 1897.

The number of marriages solemnized in Lowell in 1898 was 880, solemnized elsewhere 82.

NUMBER OF MARRIAGES IN EACH MONTH OF 1898.

January,	84	May,	64	September,	94
February,	71	June,	125	October,	105
March,	27	July,	53	November,	92
April,	105	August,	72	December	70

NATIONALITY OF CONTRACTING PARTIES.

	Grooms	Brides
United States.....	390	370
Canada.....	210	214
Ireland.....	143	161
England.....	63	51
Scotland.....	12	7
British Provinces.....	50	68
Sweedden.....	16	17
Austria.....	21	20
Azores.....	14	14
Turkey.....	5	4
Other Races.....	38	36

	Groom	Bride
Oldest Couple married.....	76	65
Youngest Couple married.....	18	16

Oldest Person, 78.

Youngest Person, 16.

Grooms under 21 years 47.

Brides under 18 years, 23.

DEATHS.

The total number of deaths returned and recorded in the City Clerk's office for the year 1898 was 1,835. Of these 26 died in other cities or towns within the state, making the number of deaths returned and recorded as having occurred in Lowell 1,809.

Decrease from 1897.....	48
Males.....	945
Females.....	890
Deaths between 80 and 90 years of age....	57
Deaths over 90 years of age.....	8
Stillborn.....	145

Statistics in greater detail relating to Deaths may be found in the Annual Report of the Board of Health for the year 1898.

Respectfully,

GIRARD P. DADMAN,

City Clerk.

TABLE

GIVING THE NUMBER OF BIRTHS, MARRIAGES, AND DEATHS IN LOWELL, SINCE ITS INCORPORATION.

Year.	Population.	Births.	Marriages.	Deaths.
1843		Est. 5,010	Est. 4,500	4,186
1844	25,163	662	319	362
1845		660	399	363
1846	29,127	772	591	690
1847		719	659	949
1848		796	516	825
1849		672	320	903
1850	33,383	966	674	492
1851		1,018	669	629
1852		1,007	669	604
1853		1,093	742	734
1854		1,092	808	834
1855	37,554	1,039	687	766
1856		1,034	632	790
1857		1,051	585	818
1858		827	467	626
1859		983	496	739
1860	36,827	1,077	497	720
1861		949	459	713
1862		763	368	641
1863		657	302	695
1864		658	335	633
1865	30,990	672	406	575
1866	36,878	813	625	749
1867		826	596	640
1868		860	495	857
1869		858	575	763
1870	40,928	926	515	952
1871		886	647	1,033
1872		1,099	670	1,048
1873		1,365	705	1,161
1874		1,356	580	1,184
1875	49,688	1,296	513	1,020
1876		1,264	514	1,147
1877		1,341	552	1,029
1878		1,332	546	1,088
1879		1,412	635	1,006
1880	59,485	1,770	744	1,312
1881		1,840	786	1,287
1882		1,755	813	1,322
1883		1,681	848	1,432
1884		1,786	735	1,401
1885	64,107	1,769	707	1,328
1886		1,813	813	1,499
1887		1,835	873	1,872
1888		1,886	886	1,763
1889		2,133	965	1,894
1890	77,696	2,175	979	1,960
1891		2,203	944	1,976
1892		2,714	941	2,228
1893		2,688	955	2,108
1894		2,764	793	1,790
1895	84,359	2,772	978	1,898
1896		2,805	854	1,896
1897		2,622	866	1,882
1898		2,422	962	1,935
		81,244	40,710	65,747

TWENTY-FIRST
ANNUAL REPORT
OF THE
BOARD OF HEALTH
OF THE
CITY OF LOWELL
FOR THE YEAR 1898.



LOWELL, MASS.:
LOWELL SUN PRINT: SUN BUILDING,
1899.

ORGANIZATION 1898.

BOARD OF HEALTH.

THOMAS F. HARRINGTON, M. D.

THOMAS J. MULLIGAN.

EDMUND H. PACKER, M. D.

HEALTH DEPARTMENT OFFICERS.

JOHN F. MURPHY, *Superintendent.*

THOMAS B. SMITH, M. D., *Bacteriologist.*

ELIZABETH M. RAFTER, *Registrar.*

FREDERICK A. BATES, *Inspector.*

STEPHEN GARRITY, *Plumbing Inspector.*

WM. H. CONNORS, " "

FRANCIS J. O'HARE, *Inspector.*

WM. A. JOHNSON, *Physician to Board.*

STEPHEN GARRITY, *Member of Plumbing Commission.*

REPORT.

LOWELL, MASS., Jan. 2, 1899.

*To the Honorable Mayor and City Council of the
City of Lowell:*

The Board of Health respectfully submits its twenty-first annual report, covering the work, expenditures and receipts of the Department for the year 1898.

Organization. An investigation into the affairs of the Department by a Committee of the City Council delayed the organization of the Department until May, when Edmund H. Packer, M. D., and Thomas J. Mulligan were appointed to vacancies on the Board.

THOMAS F. HARRINGTON, M. D., was elected Chairman.

THOMAS J. MULLIGAN, Secretary.

CHARLES L. FOX, M. D., Bacteriologist.

WM. A. JOHNSON, M. D., Health Physician.

The following communication was received from His Honor, the Mayor :

To the Board of Health of the City of Lowell.

Gentlemen,—I have this day, on your application to me dated February 12, 1898, for the removal of Horace H. Knapp, a veteran, from his office as Agent of your Board, made an order, a copy of which is herewith enclosed. I have also this day notified said Knapp of his removal from said office, and directed him to turn over to your Board all books and papers belonging to said office, and to the City Treasurer, all moneys, if any, belonging to the City.

Yours respectfully,

J. W. BENNETT,

Mayor.

“Application having been made to me on the thirteenth day of February, 1898, by the Board of Health of the City of Lowell, for the removal of Horace H. Knapp, from his office or employment as Agent of the Board of Health of said City, under Section 5, of Chapter 517, of the Acts of 1896, said Knapp being a veteran within the meaning of said Act, for the causes alleged in said application, that said Knapp has refused to comply with the order of said Board instructing him to turn over to the City Treasurer certain moneys

in his hands and custody belonging to said City, on or before December 31, 1897, and his refusal to present to said Board, receipts for certain moneys turned over by him to said City Treasurer.

I appointed, February 17, 1898, at 2 o'clock P. M., at my office in said Lowell, at the time and place for a hearing to be given upon said application and caused notice of said time and place to be given said Knapp, and at the time and place aforesaid, said Knapp being present and represented by William H. Anderson, Esq., as his counsel, I heard evidence of said charges and the said Knapp and his counsel, in his defense, and afterwards by continuance, to wit, on the first day of March, 1898, I further heard said evidence and said defense, and now having duly considered the evidence produced at said hearings, I feel that said charges have been sustained and that the same constitute sufficient reason for the removal of said Knapp from his said office or employment. I therefore order and adjudge that said Horace H. Knapp be and he is hereby removed and discharged from the office and employment of Agent of the Board of Health of the City of Lowell.

Witness my hand this third day of May, 1898.

J. W. BENNETT,

Mayor.

Reorganization. The method of conducting the work of the Department was altered somewhat from that pursued in previous years, due partly to facts brought out in the investigation and partly to the general public dissatisfaction on the results obtained from the expenditure of so much money in the Health Department. It is often hard for people to realize that they have received any benefit from money invested in what might be called material affairs, but when it comes to convincing them that they are the gainers, often directly, from improved sanitation or mode of living, the task seems nigh hopeless. There is perhaps no municipal department that is of more importance and on whose proper management the peace and comforts of a community depend, than that of the Health Department.

The present Board believing that the greatest good for the individual and for the public in general, could be best obtained by a hearty co-operation of all the citizens with the Board, took steps to bring about such a state of affairs, and that it has well succeeded is now admitted. The practice of informing a property owner of certain sanitary defects in his property observed by the Inspectors from this Department and suggesting remedies for the same, rather than the more authoritative and mandatory summons to do certain things, met with

the most cordial response from the citizens, and in almost every instance such a notice was obeyed more readily than if it had contained the usual threat of arrest. The city was divided into districts and the public was given the benefit of a constant sanitary supervision by an experienced Health Inspector, rather than a spasmodic, spring cleaning inspection once a year.

This work was done by the regular inspectors of the Department, without increasing the size of the force, and who at the same time carried on the house to house inspection of the previous years.

The Inspectors make a written daily report to the Board each week of the work done and the marked decrease in the number of nuisance complaints from the citizens, shows how closely the Inspector watches his district. A detailed report of the work done appears in another part of this report.

The Chairman of the Board has been at the Health Office between 11 and 12 o'clock each day to receive any citizens who might have business to transact with the Department, and also to perform any other duties requiring attention of the Board.

The clerical work of the Department was entrusted to the lady clerk who performed those duties in a most acceptable manner and who found

no difficulty in carrying out the rules and regulation of the Department.

Disposal of City Garbage. During the past year the Yard Department has been under the supervision of a Superintendent who gives his whole time to that branch of the work. An examination of the Superintendent's report will show that a greater amount of work has been done and at a less cost than in previous years. The question of the proper method of disposing of the city refuse is one that is receiving the attention of municipal authorities throughout the country.

Lowell was the first New England city to try the cremating process for the destruction of garbage, and there is now very little doubt but that cremation is the proper sanitary method of disposing of this waste.

Owing to the inadequate size of the furnace as well as an insufficient appropriation for carrying on this work, Lowell burns about 50 % of the city garbage, meaning swill and market refuse; the other half is collected by licensed farmers who use it as a fertilizer or feed it to hogs. During the winter months nothing is burned at the cremator, except the market refuse and refuse from hospitals and those houses reported to the Health Office as containing a case of infectious or contagious disease; the swill during these months is sold

to farmers. The Board of Health does not grant the swill licenses, but recommends the same to the Board of Alderman who have the granting of the licenses. The Board refuses to recommend any applicant who keeps cows whose milk is to be sold, and also refuses a swill license to collectors of grease, etc., so-called "soap men." The ashes and refuse other than swill are collected by the Health Department and are used for filling in low lands. As the city grows these hauls become longer, which must necessarily increase the force and cost for doing this work. This brings us to the consideration of the question whether the collection of garbage and refuse belongs to the Health Department either from a sanitary or economic point of view. We believe that the City's interest would be best served by having the collection of ashes and garbage, cleaning of streets and catch-basins, etc., done by the Street Department. There seems to be no reason why the Health Department should have the collection of garbage and refuse any more than there is that that department should construct sewers, or water streets, again it is almost conclusive that from a business standard the work should be done more economically as a part of one of the larger departments where there are always extra force and teams that could be used on those occasions, often arising in the work of the

Health Department, which necessitates an increased expenditure.

This view is strengthened when one realizes that the Street Department cleans the front streets, the Health Department cleans the back streets, while the Sewer Department cleans out the man holes, throwing up the contents into the streets, there to remain for many hours, a source of sickness and disgust to the public.

The question would seem to be not whether the Health Department of Lowell collects ashes and swill cheaper than the Street Department of some other city, but whether the work could not be done more economically by the Street Department of Lowell than under the present method.

The collection of ashes and garbage by the Health Department has, from year to year, increased to such a degree that it would almost appear as if it were the sole work of the Department, yet we can find no legitimate reason why this Department should have taken upon itself to do such work when it is clothed with all the necessary power and authority to enforce the rules and regulations against the existence of nuisances arising from the same.

Sewers. Early in the summer the attention of the Board was called to the nuisance caused by odors arising from Hale's Brook, and an examination showed a most unhealthy state of affairs. Near the

city line the sewage and drainings from the Harvard Brewing Co. emptied into the brook by means of an open trench and the hops, yeast, etc., collected on the banks of the slow current stream, giving rise to odors which in the warm, humid nights became unbearable to the citizens of a large section of the city. Following the course of the stream, it was found that all waste and drainage from the establishments of Howorth & Watson, American Bobbin, Spool and Shuttle Co., Howard St. Engine House, Lowell Wadding and Paper Co., Walter Coburn & Co., Dobbin Boiler Works, D. W. Horne & Son, as well as the contents of the Howard Street city sewer draining Hale, Grand, Howard and Daly Streets, emptied into the brook. The Board took prompt action in the matter and legal notices were served on the City of Lowell as well as on those parties and corporations creating the nuisance. The Board of Health petitioned the City Council for the construction of the necessary sewers to abate the nuisance, and the sum of \$14,000.00 was appropriated by the Council to do the same. The sewer is now almost completed so that all the sewerage can now be turned into the large intercepting sewer, and Hale's Brook be freed from contamination which has been the cause for many years of much annoyance and complaint.

The following communication was sent to the City Council concerning Hale's Brook :

*To the Honorable the Mayor and Members of the
City Council of the City of Lowell.*

The Board of Health of the City of Lowell, having made a thorough investigation of Hale's Brook, desire to call the attention of your honorable body to the condition of the same within the city limits, and state that in its present condition it is detrimental to the health of not far from one thousand families residing in its immediate vicinity; that with the natural growth of the city this number of families must increase; that it is a menace to the health of the neighborhood and threatens that of the whole city; that the nuisance is becoming greater each year and in the opinion of the Board of Health the time has come when radical measures must be adopted for the removal of this public nuisance, and we therefore recommend that your honorable body appoint a permanent commission to consider the matter and report what action ought to be taken in the premises.

The Board of Health believes that so far as may be done, a plan should be adopted which will straighten the channel and enclose it on both sides with a suitable retaining wall of masonry with the view of making the improvement permanent and effectual in destroying what is apt to

become a veritable pest hole within our city. The Board of Health would respectfully urge prompt action in this matter, especially as this is the time of the year when the most knowledge on the conditions of the brook can be obtained.

We have the honor of being, your humble servants,

THOS. F. HARRINGTON, M. D.

E. H. PACKER, M. D.

THOS. J. MULLIGAN.

*To the Honorable the Mayor and Members of the
City Council of the City of Lowell.*

For many years, River [Meadow Brook from the city line at Chelmsford to its mouth at the Concord River, has been the source of such annoyance to the citizens of Lowell on account of its filthy condition and the noxious odors arising from the same. While the construction of the intercepting sewer and the extension of the Thorndike Street sewer in 1894, were effectual in removing many of the private sewers then emptying into the brook, yet an examination of the brook to-day shows it to be practically an open sewer, flowing through a crowded district of our city, endangering the lives of many families and the cause of com-

plaint not only from those living in its neighborhood, but also from people passing through that section of our city.

There are many causes at work producing this state of affairs, viz. the emptying into the brook of sewage from various business concerns as well as that from private property; also the accumulation of drains entering Hale and Howard Streets sewers which has its outlet in the brook near Howard St. Bridge; the slow current of the stream as well as its tortuous course, all of which has had the effect of so polluting the stream that it has become a menace to public health and has rendered the enjoyment of life in that locality impossible.

In another communication to your Honorable Body the Board of Health has set forth the necessity for immediate action in this matter and we deem it of sufficient importance as a means of protecting the health of the citizens of Lowell, to petition that a loan of \$10,000 be made for the purpose of, first, constructing such public sewers as are necessary to prevent any drainage entering Hale's Brook; second, to dredge the brook and remove such obstructions as are now tending to impede the flow of water in the brook. Said sum of money to be charged to and expended by whatever department your Honorable Body may direct. We believe these remedies together with

those now in our power to enforce will be sufficient to permanently relieve the brook of those causes that now tend to make it a public nuisance.

Yours respectfully,

THOS. F. HARRINGTON, M. D.

E. H. PACKER, M. D.

THOS. J. MULLIGAN.

For the past year or more the Locks and Canal Co., has been deepening and straightening the Merrimack River channel at Hunt's Falls, through a grant of power from the Legislature; one of the results of this work was to permit the sewerage from the Read street and Myrtle street sewers to collect on that part of the river bed left uncovered by the narrowing of the stream; this soon became a source of annoyance and complaint from the people of Centralville. Upon petition from the Board of Health the City Council again voted money for the construction of the necessary extension to these sewers in order to abate this nuisance; this has not yet been done on account of the high water of the river, but the sewer pipe has been procured and all is in readiness for commencing the work.

The numerous complaints received at this office from imperfect sewerage in our city emphasizes the fact that the system in Lowell is inadequate

and imperfect, and one that sooner or later must be remedied in a most radical manner. The practice of entrusting this work to a committee from the City Council is no doubt accountable for much of the present unsatisfactory state of affairs. That the Board or Committee having this work in charge should be permanent either in whole or part is admitted by all who have studied the question without bias. And again, the fact that Lowell is an inland city emptying its sewerage into a river whose waters are apt to be used, and in this case are used, for drinking purposes, brings the question into the category of those municipal problems, which at no distant date, must be handled by the United States Government.

Water Supply. Another question closely allied in importance to the one just considered is that of the water supply used for drinking purposes. It is generally admitted that the two municipal questions of primary importance for the health and prosperity, consequently the growth, of any city are those relating to pure water supply and proper sewerage. For the past year or more the City of Lowell has derived its entire water supply used for drinking and domestic purposes from the driven well system introduced in 1893. In the last report of the Board of Health attention was called to the liability of contamination of the well water in its passage through the old

filter gallery. Since then this source of danger has been eliminated by extending the pipes from the well plant through the filter gallery, thus doing away entirely with any possibility of the source of all the water supplied being other than that from the wells. As the mixing of the well water with the Merrimack river water was always regarded with suspicion on the occurrence of any number of cases of typhoid fever in Lowell, one would look for the verification of this assumption in a decrease in the number of cases of typhoid fever reported during the year 1898; but such is not the fact for we find that there has been practically no reduction, and while it is true that the returning soldiers brought typhoid fever home from Cuba, yet the number of cases of such was small and does not effect the conclusion that other sources besides the water supply are accountable for the prevalence of typhoid fever in Lowell.

We believe that the question of the quality of the water used for drinking purposes is primarily a sanitary one and as such should come more intimately under the control of the Health Department.

The purity of potable water should be derived from a bacteriological examination rather than from a chemical analysis. A complete and accurate record of the number and varieties of organism habitually present in the water used, as well as

the variations in analysis due to natural conditions should be at hand, so that any deviation from the standard could readily be discerned and investigated when outbreaks of disease arise which throw suspicion on the water supply as the cause. Lowell has a bacteriological department where such examinations could be readily carried on.

Medical Inspection. The necessity for medical inspection of schools becomes more apparent each year. The system is now an indispensable part of all Health Departments in those cities where the saving of lives does not depend on political or penurious whims. There is no fad nor experiment about it; the number of cases of infectious and contagious diseases that are daily mingling unnoticed in public, spreading death or bequeathing delicate constitutions to those who otherwise might have escaped, cannot be estimated. No statistics nor tables can accurately state the case, yet it is a fact now appreciated by all who have given it any thought that the true danger from infectious and contagious diseases is in the lack of knowledge in recognizing these diseases. What a storm of indignation and fear would arise if small pox or yellow fever were permitted to go about in public; yet how often do we see diseases which are more fatal to the future well being of the child, in the schoolroom, street car

or public gatherings; and no attempt made to assist health authorities to remove the same. On the contrary, it is not an uncommon experience for the health officials to meet with open hostility in their efforts to protect the public from this danger. After studying the various methods in use in cities of this country, we believe that if a corps of physicians were appointed by the Board of Health whose duties would consist of not only inspecting the schools of their respective districts, but should also be held directly responsible for the proper isolation of all cases of infectious and contagious diseases occurring in their districts, that the danger to the public from these diseases would be reduced to a minimum. This work could be readily done by tactful physicians without interference or friction to the attending physician. The great benefit a corps of physicians, as described above, would be to the City of Lowell during the summer months when cholera infantum kills more infants than all other causes added together, would sufficiently repay the city for the money expended. That cholera infantum can in a great measure be eliminated by proper instruction to parents and guardians on the errors of infant feeding, and that such education can be best done by physicians mingling in the crowded districts with the people living there, does not admit any doubt.

Contagious Disease Hospital. The following letter on a contagious disease hospital was sent to the City Council and as yet no action has been taken on the same.

To the Honorable the Mayor and Members of the City Council of the City of Lowell.

Gentlemen,—The Board of Health desires to respectfully call your attention to the provisions of Chapter 511 of the Acts and Resolves of the Massachusetts Legislature for 1894, and to earnestly urge that your body takes such immediate action on the same as the safety of the inhabitants of the city demands.

You will notice that the provisions of Chapter 511 specifically state what the course of the City Council must be, yet nothing has been done to carry out the same, although the question has been thrice submitted to you by the Board of Health. The need of such a hospital in Lowell as is contemplated by this Act becomes more apparent each year. The Lowell Hospital is the only hospital that can receive any cases of a contagious or infectious nature. St. John's Hospital and the Lowell General Hospital are not permitted to take any such cases.

The accommodations at the Lowell Hospital are limited, and the city is apt to be brought face to

face with having cases of a disease dangerous to the public health, yet without any means to care for the same.

During the month just passed, Lowell has had practically an epidemic of Scarlet Fever, and while the Health Department takes every precaution known to science to prevent the spread of the disease, the number of cases reached 112 before it wore itself out.

We have every reason to know and believe that if the first few cases could have been properly isolated in a hospital, that the disease could have been stamped out before it gained a headway and brought havoc to many families.

That proper isolation will readily stop the spread of contagious diseases and that such isolation is not possible in the majority of cases outside of the hospital, must be admitted by all who have noticed the carelessness and almost criminal indifference shown by many in the care of these diseases.

We would, therefore, in the interest of the good of our city and the welfare of its people, again urge you to take immediate steps to correct the existing state of affairs by erecting a suitable hospital for the care and treatment of persons suffering from contagious diseases. Following are the provisions of the Act.

Be it enacted, etc., as follows:—

SECTION 1. In any city in which no suitable hospital accommodations have been provided for the care and treatment of persons suffering from contagious diseases dangerous to the public health, the Board of Health of such city may address a communication to the Mayor thereof, stating that in the opinion of said board the safety of the inhabitants of the city demands that suitable hospital accommodations should be provided for the reception and treatment of persons suffering from such disease, other than those of small pox and of a venereal nature. The Mayor shall forthwith transmit such communication to the City Council and the City Council shall forthwith order such hospital accommodations to be provided and shall make the necessary appropriation therefor.

SECT. 2. Every city in which hospital accommodations have been provided in accordance with the provisions of this Act, shall make an annual appropriation for the maintenance of such hospital accommodations, and said appropriation shall be expended under the direction of the Board of Health unless otherwise ordered by the City Government.

SECT. 3. No discrimination shall be made against the treatment of venereal diseases in the Out Patient Department of any general hospital in any city where special hospitals, excluding hospitals connected with penal institutions, are not

provided for the treatment of such diseases at public expenses, and said hospital may establish a separate ward for the treatment of such cases.

SECT. 4. This Act shall take effect upon its passage.

The Board of Health would repeat the suggestion made in its report of 1897, that a wing be added to either St. John's Hospital or the Lowell General Hospital which would do much to reduce the cost of constructing and maintaining a hospital as contemplated by the provisions of this Act. We remain,

Most respectfully,

THOS. F. HARRINGTON, M. D.

THOS. J. MULLIGAN.

E. H. PACKER, M. D.

Bacteriological Department. Without any attempt to speak disparingly of the other branches of work in the Health Department, it is becoming more noticable each year that the Bacteriological Department is of primary importance. In October the department lost the service, through death, of Dr. Charles L. Fox, who has had charge of the bacteriological work since its adoption by the Lowell Board of Health and the degree of efficiency which it has reached is due to his labors and skill. Lowell has a bacteriological laboratory second to none in the state.

Thomas B. Smith, M. D., Ex-City Physician, has been elected to the vacancy caused by Dr. Fox's death. A detailed account of the work done during the year appears elsewhere.

Public Morgue. The necessity for a public morgue has often been felt in Lowell, and the Board of Health took cognizance of the same in the following letter to the Trustees of the City Cemeteries:—

Trustee of Public Burial Grounds, Lowell.

Dear Sir,—The Board of Health would respectfully call your attention to the need of a morgue or other suitable place for the reception of bodies that are in such a state of decomposition as to make their keeping in a public place undesirable.

As far as we know there is no place in Lowell where such bodies can be taken without causing annoyance and nuisance. We would therefore, ask that your board provide such a place in connection with the present accommodations as in your judgment the interest of the city would be best served. We remain,

Yours respectfully,

THOS. F. HARRINGTON,

Chairman.

Undertakers Licenses. In pursuance of Chapter 32 of the Public Statutes, and Chapter 4 of the Ordinances of the City of Lowell, passed Nov. 27, 1883, the Board of Health granted undertakers' licenses to the following:—

JOSEPH ALBERT,	AMEDEE ARCHAMBAULT,
JAMES W. BROOKS,	J. B. CURRIER,
PETER DAVEY,	J. H. McDERMOTT,
C. H. MOLLOY,	JAMES F. O'DONNELL,
WM. RENAUD & CO.,	JOHN F. ROGERS,
PETER H. SAVAGE,	JOHN A. WEINBECK,
CHAS. M. YOUNG,	EDWARD J. O'DONNELL.

Disinterment of Bodies. A request had been received from one of the undertakers for a permit to disinter the bodies of persons who had died from a contagious disease, and the Board of Health, in order to establish a safe precedent for such cases, wrote to the State Board of Health as follows:—

During the past few months the Board of Health has been asked to grant permits to remove interred bodies from Lowell cemeteries to other places of interment, in one case outside of Massachusetts. Our records show that in some of the cases the person died from contagious and infectious diseases. The Board of Health would like to fix a permanent rule applicable to all such cases, and would respectfully ask your opinion on

the advisability of permitting the disinterment of bodies of persons who have died from an infectious disease irrespective of the date of such death, or whether it should make a difference if the date was very remote; if so, what limit of time would you recommend? Thanking you in advance for your kindness, I am,

Yours respectfully,

THOS F. HARRINGTON, M. D.,

Chairman.

The following answer was received:—

STATE BOARD OF HEALTH,

BOSTON, Oct., 19, 1898.

DR. T. F. HARRINGTON,

Chairman Board of Health, Lowell.

Dear Sir,—In reply to your inquiry relating to the removal of bodies of persons who have died of infectious disease. I should think a period of two years would be a safe limit. It is not probable that there are any disease germs which would survive that length of time. Another safeguard exists in the fact that bodies are usually enclosed in fairly tight coffins and these again are placed in an outside wooden box.

The German Imperial Board of Health made some experiments to settle this question and found that the germs of disease in dead bodies rarely remained active longer than one year, not excepting anthrax, the most persistent of all germs.

Yours respectfully,

SAM'L W. ABBOTT,

Secretary.

Infectious Diseases. In relation to the infectious and contagious diseases reported to this office, the Board found it necessary to change somewhat the rules followed in previous years.

Scarlet fever has been quite prevalent this year, and on the opening of the fall term the following letter was sent to Superintendent Whitcomb:—

MR. A. K. WHITCOMB,

Superintendent Public Schools, Lowell.

Dear Sir,—Enclosed please find a list of cases of scarlet fever reported to the Health Department during the vacation season. The number reported is larger than we usually have during July and August, and we would advise special diligence on the part of the teachers at the opening of school in order that there may be no increase in the number of cases.

We would ask you to see that the rule in relation to the furnishing of certificates be enforced. A certificate from the attending physician may be accepted from any of the cases recorded in July, but no case occurring since August 1st, should be admitted to school without a certificate from this office; which rule also relates to other children in the same house.

Yours respectfully,

THOS. F. HARRINGTON,

Chairman.

In addition to the above the Board notifies the Superintendent of Schools daily of all cases reported at the Health Office, with their addresses and schools attended. The Health Office also notifies the Superintendent of Schools that the time of quarantine has elapsed in each case, and no child can return to school until such notification has been received. In this way the Health Department has full control of the case, and the family physician is freed from annoyance of importuning parents.



OFFICE OF

THE BOARD OF HEALTH

THOS. F. HARRINGTON, M. D., Chairman.

THOS. J. MULLIGAN, Secretary.

E. H. PACKER, M. D.

*To Superintendent of Schools,**Dear Sir:—*

The following cases of contagious and infectious disease were reported this day to the Health Department:

Name,	
Residence,	
Disease,	
School,	
Name,	
Residence,	
Disease,	
School,	

You are hereby requested to exclude all members of infected families from attendance at school (including evening school) until notified by this office that all danger from contagion has passed.

Yours respectfully,



OFFICE OF
THE BOARD OF HEALTH

THOS. F. HARRINGTON, M. D., Chairman.

THOS. J. MULLIGAN, Secretary.

E. H. PACKER, M. D.

To Superintendent of Schools,

Dear Sir:—

You are hereby notified that all danger of infection has passed in the following cases:

Name,	
Residence,	
Disease,	
School,	
Name,	
Residence,	
Disease,	
School,	

and that members of these families may be permitted to return to school.

Yours respectfully,

Diphtheria. That every case of suspected sore throat should be subject to a bacteriological examination is not only in accord with the commonly accepted standard of medical knowledge, but is no more than the protection which one individual owes another. The inspector from this office often hears at the funeral or fumigations of a patient who has had diphtheria, that there had been a previous case of "tonsillitis" or "mild sore throat" in the house, and that there had been a physician in attendance. That such negligence to give the family and the public the protection of a positive diagnosis in all cases of sore throat seems almost criminal when we realize the ready and positive means offered by our city for such examination.

So persistent is the Klebs-Loeffler bacillus in case of diphtheria that no case of diphtheria should be released from quarantine until at least two negative cultures have been made from each case. There are cases constantly occurring to emphasize the importance of this necessity, an example of which is the following:—

Miss ———, age 35, was reported as being ill with diphtheria on Nov. 22d; the diagnosis was confirmed by the bacteriological examination, and she was removed to the Lowell Hospital on the same day; she was discharged within a week as having recovered. Dec. 2d she called a different

•

physician. Her throat did not look diphtheritic but he, knowing she had been ill with diphtheria, took a culture which upon examination proved to contain the Klebs-Loeffler bacilli. Dec. 3d she was again taken to the Hospital and on Dec. 6th an investigation showed a negative culture and the patient was discharged.

Scarlet Fever. There has been a marked increase in the number of scarlet fever cases occurring during the year. There were 309 cases, with 6 deaths. The type was of a mild character, and in many cases the diagnosis was confirmed only by the occurrence of secondary cases in the same family. The trouble of properly isolating these cases without the aid of a contagious disease hospital was again emphasized. In May the occurrence of a large number of cases of scarlet fever on the same milk route was traced to an unrecognized case at the dairy of the milkman, and a complete report of the circumstances will be found in the report of the Health Physician.

Tuberculosis. The large number of deaths from tuberculosis in some form that occur annually in our city has been the subject of much unfavorable comment at state, medical and health meetings. In a city of Lowell's composition there are necessarily factors at work which tend to foster a large death rate from this cause. Lowell is

primarily and chiefly a manufacturing city, with the physical evils that such a life entail. The once accepted theory that consumption is hereditary is now no longer insisted upon since it is proven beyond argument that the disease is caused by a germ, the exact properties of which are now well known. Yet, truer still is the fact that long hours of hard work in illy-ventilated, over-heated, dusty mills, accompanied with crowded, unsanitary dwelling quarters, will produce a soil favorable for the reception and growth of this germ, as well as a most perfect opportunity to transmit it to others in a similar state of debility. When a city goes through two or three generations of such conditions, and its death rate does not reach a high-water mark, from consumption and its allied diseases then there is some remedying influence at work more powerful than nature herself. There are many reasons why it is difficult to reduce the death rate from consumption aside from the ignorance of the public on the origin and spread of the disease. There is, perhaps, no factor as powerful as what may be called false family pride, in checking the spread of this great slaughterer of mankind. When people learn that consumption is a disease of the same class as diphtheria, scarlet fever or small pox, rather than a sister disease to insanity and cancer, and that there is no more discredit in having a death from the same than

there is now felt from one of the diseases mentioned, when physicians will return the true report to the Board of Health in deaths from this cause without regard to the influence such a return may have on the settlement of impending insurance claims, when the public appreciate that consumption is a preventable disease and insist on having all precautions taken against its spread, then the Board of Health may hope that some good can be accomplished in attempting to check this disease.

Public Expectoration. The Lowell Board of Health has followed the stand taken by other cities and voted, "That the deposit of sputum in street cars is a public nuisance, source of filth and cause of sickness, and hereby orders: That spitting upon any floor of any street car be, and hereby is prohibited."

We are awaiting the co-operation of the suburban towns at the termini of the Lowell and Suburban Street Railway to adopt the same rule so that its enforcement may become practical.

Cholera Infantum. The remarkable low death rate from cholera infantum obtained in 1897 has been maintained during 1898. There were 186 deaths in 1898 compared with 177 in 1897, which was the lowest death rate for fifteen years.

That there should be some systematic effort made to reduce the infant mortality seems apparent.

The good results obtained in some of the larger cities as well as that in our own city, in the summer of 1897 from fresh air excursions and in spreading knowledge on the care and feeding of infants, would suggest that much is possible in that direction. We would most respectfully ask that some provisions be made for such a purpose in the coming year.

Measles. Lowell has been tolerably free from measles during 1898. There were 33 cases reported, with no deaths.

Public Sanitation Day. There is perhaps no more powerful means of lessening the dangers from preventable diseases than that of educating the public to the realization of the fact that many of the more common diseases can be avoided through the exercise of cleanliness on the part of the individual or public. That this knowledge can be most thoroughly and effectively spread by the school children is admitted. The health truths impressed upon the child at school are often discussed at home, and the results are far wider [spread than we think; and then again, if the child of today is enlisted against unsanitary methods of living how much easier will it be to carry on the fight later when they occupy the positions we now fill. We would, therefore, recommend and advise that steps be taken to train the minds of the school children on the importance

of hygiene and sanitation not by adding another subject to an overburdened school curriculum, but by some practical demonstration of the subject. One way which suggests itself is to set aside one day each school term to be devoted to the consideration of this question. This would give it a local significance which would of necessity bring good fruit.

Stable Licenses. During the year 19 licenses to erect or occupy a building for stable purposes were granted by the Board of Health in accordance with the provisions of Chapter 220 of the Acts of 1891 and Chapter 213 of the Acts of 1895. In many cases a hearing was granted to parties objecting to the granting of the license

Milk Inspection. The Inspector of Milk is in no way connected with the Health Department, yet the Board has received valuable assistance from him in the investigation of outbreaks of disease which threw suspicion on the milk supply as the medium of spreading the same. It would seem as if there is every reason why the Milk Inspector should be connected with this department, yet, all attempts to bring about such a state of affairs has met successful opposition. With a well equipped laboratory for biological research, there seems to be no reason why the public should not receive the benefits to be derived from a positive knowledge of the purity of the milk supplied to Lowell.

The many suggestions and recommendations made throughout the foregoing report have for their object the establishment of a Board of Health on a basis consistent with the importance and dignity of such an organization; a Board free from all associations with work which has or appears to have any political entanglements; a Board working only for the protection and preservation of the public health; in other words, a Sanitary Board, one which should merit and would receive the assistance and encouragement of all physicians and citizens. If we have even made a beginning to such a state of affairs we will feel that we have not wasted our opportunity.

Vital Statistics. The total number of deaths for the year 1898 was 1808 a decrease of 47 over 1897. The percentage of deaths for the year was 20.78 compared with 21.32 in 1897. The increase in the number of deaths from heart disease, apoplexy and paralysis, as well as the very noticable increase in deaths from kidney disease, would suggest that some cause is producing changes in the circulatory system which did not show itself until the past few years. While it is not a safe rule to form conclusions on a few years' statistics, yet the tables appended will show that the death rate curve from the diseases mentioned has been quite uniformly upwards since the change in the city water supply, from the soft Merrimack

River water to the harder well water now used for drinking purposes in Lowell.

VITAL STATISTICS.

	1898	1897	1896	1895	1894	1893
Deaths, male.....	924	917	902	943	898	1015
Deaths, female.....	884	938	999	914	877	1080
Totals.....	1808	1855	1901	1857	1775	2095
Children under one year...	516	533	584	566	541	683
“ “ two years..	622	596	729	689	652	820
“ “ five “ ..	708	778	844	788	751	936
Per cent. of total deaths						
under five years.....	38.1	41.9	42.4	41.3	42.3	44.7

Birthplace.	Of Deceased.	Of Parents.
Lowell.....	866	146
Massachusetts, elsewhere.....	96	168
Other States.....	200	390
Ireland.....	322	1136
Canada.....	161	919
Great Britain.....	97	354
Other Countries.....	52	240
Unknown.....	14	263
	1808	3616

PLACES OF DEATH.

Ward 1.....	109
“ 2.....	200
“ 3.....	150
“ 4.....	166
“ 5.....	179
“ 6.....	210
“ 7.....	331
“ 8.....	120
“ 9.....	127

Almshouse.....	97
Lowell Hospital.....	24
St. John's Hospital.....	81
Lowell General Hospital.....	14
	<hr/>
Total Deaths.....	1808
Still Births during the year.....	143

PLACES OF INTERMENT.

Catholic Cemetery.....	751
Edson Cemetery.....	369
Lowell Cemetery.....	101
Other Cemeteries.....	12
Removed from the City.....	575
	<hr/>
	1808

DEATH RATE.

	Year.	Population.	Deaths.	Death Rate.
Population, census.....	1890	77,696	1959	25.21
“ estimated.....	1891	79,029	1972	24.95
“ estimated.....	1892	80,361	2224	27.67
“ estimated.....	1893	81,694	2095	25.62
“ estimated.....	1894	83,026	1775	21.38
“ census.....	1895	84,359	1857	22.01
“ estimated.....	1896	85,700	1901	22.18
“ estimated.....	1897	87,000	1855	21.32
“ estimated.....	1898	87,000	1808	20.78

PRINCIPAL CAUSES OF DEATH.

	1898	1897	1896	1895	1894	1893
Cholera infantum and other						
diarrhœal diseases....	201	198	266	247	257	335
Phthisis and other tubercu-						
losis.....	209	191	207	185	209	228
Pneumonia and bronchitis..	263	276	233	235	231	343
Infantile debility, marasmus						
and inanition.....	115	133	149	142	146	216

	1898	1897	1896	1895	1894	1893
Heart disease.....	163	158	153	154	123	128
Typhoid fever.....	24	18	36	33	50	53
Apoplexy and paralysis....	104	97	83	76	61	107
Old Age.....	49	46	68	62	51	69
Disease of the brain (un- classified).....	24	38	49	55	40	43
Convulsions... ..	41	29	48	57	38	63
Disease of the kidneys....	91	46	64	62	47	54
Meningitis.....	59	98	59	62	53	56
Diphtheria and croup.....	36	41	47	53	37	37
All other causes.....	429	486	439	434	432	363
	<u>1808</u>	<u>1855</u>	<u>1901</u>	<u>1857</u>	<u>1775</u>	<u>2095</u>

DEATHS FROM CHOLERA INFANTUM.

	1898	1897	1896	1895	1894	1893
January.....	0	1	0	1	1	4
February.....	1	4	1	3	1	6
March.....	0	9	0	3	1	12
Total first quarter....	<u>1</u>	<u>5</u>	<u>1</u>	<u>7</u>	<u>3</u>	<u>22</u>
April.....	0	1	0	0	2	7
May.....	0	1	3	3	2	2
June.....	11	4	25	11	9	15
Total second quarter..	<u>11</u>	<u>6</u>	<u>28</u>	<u>14</u>	<u>13</u>	<u>24</u>
July.....	69	53	80	75	99	99
August.....	65	61	73	66	43	76
September.....	29	34	32	40	37	38
Total third quarter...	<u>163</u>	<u>148</u>	<u>185</u>	<u>181</u>	<u>179</u>	<u>213</u>
October.....	8	16	5	14	21	13
November.....	3	0	1	1	4	3
December.....	0	2	0	1	3	2
Total fourth quarter..	<u>11</u>	<u>18</u>	<u>6</u>	<u>16</u>	<u>28</u>	<u>18</u>
Total for the year.....	<u>186</u>	<u>177</u>	<u>220</u>	<u>218</u>	<u>223</u>	<u>277</u>

TABLE OF STATISTICS ON CONTAGIOUS DISEASES.

	DIPHTHERIA AND CROUP.			SCARLET FEVER.			TYPHOID FEVER.			MEASLES.			SMALL POX.		
	Cases Re-ported.	Deaths.	Per cent. of deaths.	Cases Re-ported.	Deaths.	Per cent. of deaths.	Cases Re-ported.	Deaths.	Per cent. of deaths.	Cases Re-ported.	Deaths.	Per cent. of deaths.	Cases Re-ported.	Deaths.	Per cent. of deaths.
Jan.	23	5	22	5	0	0	3	1	33	0	0	0			
Feb.	12	0	0	11	0	0	5	1	20	1	0	0			
March.	13	2	15	8	0	0	7	1	14	1	0	0			
April.	13	1	7	16	1	6	4	2	50	2	0	0			
May.	14	4	28	112	3	2	11	0	0	5	0	0			
June.	8	2	25	26	0	0	5	2	40	10	0	0			
July.	7	2	27	16	1	6	5	1	20	2	0	0			
Aug.	1	2	200	25	0	0	12	3	25	0	0	0			
Sept.	6	2	33	23	0	0	21	0	0	0	0	0			
Oct.	16	3	19	33	0	0	28	7	25	1	0	0			
Nov.	30	8	27	23	1	41	12	4	33	2	0	0			
Dec.	13	5	37	11	0	0	6	2	33	9	0	0			
Tot. '98.	156	36	24	309	6	2	119	24	20	33	0	0			
1897.	176	41	23	90	2	2	105	18	17	1086	9	1			
1896.	110	47	43	76	1	8	178	36	20	346	3	1			
1895.	120	53	44	160	4	25	172	55	19	53	1	2			
1894.	47	37	79	304	16	5	282	50	17	27	0	0	7	3	43

DEATHS CLASSIFIED.

	1898	1897	1896	1895	1894	1893
Diseases of the nervous system....	227	254	257	258	205	284
“ “ circulatory system....	166	166	160	159	133	130
“ “ respiratory system....	293	289	262	252	249	376
“ “ digestive system....	123	115	84	101	81	86
“ “ genito-urinary system	101	54	75	77	53	58
All other local diseases.....	24	54	14	14	12	7
<hr/>						
Total deaths from local diseases..	934	932	852	861	733	941
“ “ “ zymotic diseases..	305	324	412	392	427	518
“ “ “ constitu’nal dis....	274	274	313	294	307	295
“ “ “ developmen’l dis..	232	268	257	241	245	285
“ “ “ violent or un- known causes....	63	57	67	69	63	56
<hr/>						
Total deaths from all causes....	1808	1855	1901	1857	1775	2095

Notices to abate the following nuisances were sent from the office during the year 1898:—

Untrapped sinks....	91
“ water closets	4
“ basins	3
“ bath tubs.....	3
“ wash trays.....	6
“ refrigerators	5
“ urinals.....	1
“ cesspools	3
Unsealed sink traps.....	30
“ water closet traps.....	5
Defective sink traps.....	36
“ joint in soil and waste pipes.....	100
“ and clogged drains.	42
“ local ventilation pipes.....	6

Houses with no water supply.....	11
Water closets with no water supply.....	45
Houses with an insufficient water supply.....	4
Water closets with an insufficient water supply.....	41
Damp and wet cellars.....	10
Rubbish and ashes in cellar.....	132
“ “ yards and alleys.....	270
Leaky water closet bowls.....	20
Clogged and filthy water closets.....	126
Improperly ventilated soil pipes.....	9
Improper material for soil and waste pipes.....	17
To build dry wells.....	13
Leaky gas pipes.....	1
“ vaults.....	2
“ waste pipes.....	10
“ water pipes.....	21
“ roofs.....	8
Clogged waste pipes.....	16
Defective water closet tanks.....	4
Manure in yards.....	11
Loose and no covers on sinks, house and W. C. traps.....	44
Dilapidated water closet seats.....	10
Rotten and decayed woodwork around sinks.....	6
Overflowing dry wells.....	16
Hens in cellar.....	2
Dogs “ “.....	1
Open drains.....	53
Stagnant water on vacant lots.....	6
To connect with street sewer.....	18
“ remove contents of vaults.....	74
Ashes and rubbish in sheds.....	11
Plaster and whitewash ceilings.....	12
Filthy privies.....	23
“ tenements.....	9

Filthy barn cellars.....	13
Dangerous cellar stairs.....	5
Mattresses in yards.....	6
“ “ cellars.....	12
Filthy swill barrels.....	6
Broken sink collars.....	8
Cracked sinks.....	8
Filthy hen houses.....	3
Discontinue well.....	1
Filthy cesspools.....	1
Remove hens.....	1
Permits given to T. F. Fay to clean vaults.....	170
“ “ “ “ “ “ “ “ “ dry wells.....	60
“ “ “ “ “ “ “ “ “ barn cellars.....	4
“ “ “ F. A. Fox “ “ vaults.....	138
“ “ “ “ “ “ “ “ “ dry wells.....	10
“ “ “ “ “ “ “ “ “ barn cellars.....	1

During the year there were 145 vaults discontinued and filled with earth in compliance with orders from the Board of Health, divided in the following wards:—

Ward 2.....	1
“ 3.....	7
“ 4.....	14
“ 5.....	6
“ 6.....	49
“ 7.....	15
“ 8.....	24
“ 9.....	29

Garbage and Market refuse burned at Creamator
Jan. 1st—May 28, 1898.

319 tons market refuse	2 cords wood.....	\$ 7 87
24 mattresses	1 ton soft coal.....	3 70
1 bed and bedding	1 " No. 2 nut coal.....	4 25
80 dogs	Labor 1 man at \$2.00	
89 cats	and \$2.25 per day....	271 40
94 bags rags		
4 pigs	Total cost for fuel and	
1 lounge	labor.....	\$287 22
95 lbs. meat		
9 tons swill		

May 31, 1898, the Cremator was put in operation and herewith follows a weekly statement of the amount of swill and market refuse burned from that date:—

Week Ending				
June	4—76 tons.....	at	70 per ton	
"	11—78 "	"	79 " "	
"	18—73 "	"	1 03 " "	
"	25—61 "	"	84 " "	
July	2—70 "	"	58 " "	
"	9—37 "	"	81 " "	
"	16—57 "	"	56 " "	
"	23—60 "	"	78 " "	
"	30—60 "	"	72 " "	
Aug.	6—54 "	"	72 " "	
"	13—64 "	"	73 " "	
"	20—68 "	"	68 " "	
"	27—46 "	"	85 " "	
Sept.	3—82 "	"	81 " "	
"	10—74 "	"	90 " "	
"	17—59 "	"	74 " "	

Sept.	24—44	tons	.....	at	78	per	ton
Oct.	1—36	“					
“	8—35	“					
	—						
		71 tons	.....	“	83	“	“
“	15—25	“					
“	22—19	“					
	—						
		44	“	.....	“	1 23	“
“	29—19	“	refuse				
Nov.	5—17	“	“				
“	12—16	“	“				
“	19—9	“	“				
“	26—13	“	“				
Dec.	3—12	“	“				
“	10—11	“	“				
“	17—14	“	“				
“	24—15	“	“				
“	31—14	“	“				

Total amount burned during the year:—

1,646 tons swill and market refuse
 229 cats
 191 dogs
 8 loads bedding
 227 bags rags
 46 mattresses
 3 hens
 1 load rubbish
 95 lbs. meat
 1 lounge
 6 pigs

LARGEST WEEK'S WORK.

Monday,	Aug.	29	22,490	lbs.	swill
"	"	29	6,000	"	markets
Tuesday,	"	30	15,870	"	swill
"	"	30	5,300	"	markets
Wednesday,	"	31	21,750	"	swill
"	"	31	6,700	"	markets
Thursday,	Oct	1	22,210	"	swill
"	"	1	4,700	"	markets
Friday,	"	2	25,720	"	swill
"	"	2	5,700	"	markets
Saturday,	"	3	16,700	"	swill
"	"	3	10,000	"	markets

163,140 lbs. = 82 tons

7 dogs	8 tons soft coal at \$3.70	\$29.60
20 cats	5 " No.2 nut " "	4.25 21.25
2 bags and 1 bdl. rags	Labor 1 man, 7d. "	2.25 15.75
1 mattress		
1 load bedding		<hr/> \$66.60

82 tons at .81 per ton.

COST OF BURNING GARBAGE, 1898.

Coal	\$521 90
Wood	53 67
Labor	777 18
Lease of Land	150 00
Analysis of Ashes	12 00
Oil	6 48
Weighing Coal	28 25
Mason's Work	88 01
Plumber's Work	6 72
	<hr/> \$1,644 21

Cost of burning garbage,	1894.....	\$5,742 69
“ “ “ “	1895.....	3,662 53
“ “ “ “	1896.....	3 343 34
“ “ “ “	1897.....	2,612 07
“ “ “ “	1898.....	1,644 21
Lowest week's cost per ton,	1894.....	\$1 02
“ “ “ “ “	1895.....	81
“ “ “ “ “	1896.....	68
“ “ “ “ “	1897.....	41
“ “ “ “ “	1898.....	56

Financial Statement. In May, after the reorganization of the Department, an attempt was made to carry on the work with less cost than had been done previously, and a study of the appended statement shows to what degree the Board was successful. There was no curtailment in the work carried on and the regular routine of the Department was in no way neglected. There were less deaths during the year than in any year during the last decade. The expenses of carrying on the work of the Department were reduced 25 per cent. or on an average of one thousand dollars (\$1,000) each month, compared with the expenses of 1897. The following table shows the comparative cost of the Health Department for four years.

Comparison of expenditures of the Health Department from 1895-98:—

(BILLS.)	1895	1896	1897	1898
January	\$1141 38	\$ 761 84	\$1001 32	\$194 74 712 91
February	764 46	1020 76	795 93	727 27
March	783 22	613 06	777 89	441 13
April	1209 44	1173 80	1013 74	817 44
May	1165 55	1422 59	1887 91	407 58
June	996 75	897 71	1131 22	643 94
July	975 33	1157 32	1005 40	390 76
August	1019 06	823 62	592 99	501 12
September	891 09	1061 00	872 61	605 88
October	1428 78	1100 57	1103 83	705 83
November	1061 60	573 43	482 72	454 94
December	1039 83	542 76	533 36	298 11
	<hr/>	<hr/>	<hr/>	<hr/>
	\$12,476 49	\$11,148 46	\$11,198 92	\$6,901 65

(PAY ROLLS.)				
January	\$3054 26	\$3115 18	\$3946 54	\$3345 55
February	2474 96	3095 57	2618 04	2594 65
March	3130 47	2549 60	2651 80	2567 30
April	2627 25	2564 28	2784 16	3210 05
May	2549 10	3258 06	3375 40	2403 60
June	3240 59	2575 75	2707 70	2404 50
July	2538 88	2571 92	3400 55	2901 80
August	3100 16	3181 14	2720 30	2339 45
September	2485 80	2536 97	2684 10	2361 28
October	2500 93	3314 11	3328 85	3009 75
November	3141 66	2551 29	2707 95	2470 65
December	1926 87	1880 92	2719 20	3016 55
	<hr/>	<hr/>	<hr/>	<hr/>
	\$32,770 93	\$33,194 79	\$35,544 59	\$32,625 13

FINANCIAL STATEMENT OF THE HEALTH DEPARTMENT FOR THE
YEAR ENDING DEC. 31, 1898. PAY ROLLS (OFFICE AND YARD)

Jan.	1.....	\$733 50	July	2 . . . . .	..\$583 45
"	8.....	667 35	"	9.....	576 35
"	15.....	648 95	"	16.....	577 00
"	22.....	636 65	"	23.....	579 00
"	29.....	659 10	"	30.....	586 00
Feb.	5.....	670 00	Aug.	6	593 20
"	12.....	640 65	"	13.....	577 35
"	19.....	633 65	"	20.....	577 40
"	26.....	650 35	"	27.....	591 50
Mar.	5.....	649 65	Sept.	3.....	577 10
"	12.....	636 25	"	10.....	595 20
"	19.....	639 85	"	17.....	601 50
"	26.....	641 55	"	24.....	587 48
Apr.	2.....	640 25	Oct.	1.....	591 30
"	9.....	646 55	"	8.....	601 20
"	16.....	635 95	"	15.....	609 75
"	23.....	644 75	"	22.....	597 75
"	30.....	642 55	"	29.....	609 75
May	7	622 95	Nov.	5.....	604 80
"	14	594 45	"	12.....	618 15
"	21.....	591 75	"	19.....	625 15
"	28.....	594 45	"	26.....	622 55
June	4.....	601 25	Dec.	3.....	594 05
"	11.....	608 45	"	10.....	604 75
"	18.....	597 05	"	17.....	599 05
"	25.....	597 75	"	24.....	615 05
			"	31.....	603 65

\$32,625 13

PAY ROLLS IN 1898 COMPARED WITH 1897.

	1898	1897	Decrease	Increase
Ashes	\$11,209 70	\$12,793 15	\$1,583 45	
Swill	7658 20	7234 76		\$423 44
Alleys and Dumps..	2436 60	3006 58	569 98	
General Inspection.	1908 00	1908 00		
Contagious Disease				
Inspection	1205 75	1235 50	29 75	
Repairs	484 00	670 50	186 50	
Inspection of Plumb-				
ing.....	1113 00	1087 50		25 50
Blacksmith.....	786 25	787 50	1 25	
Stable	2145 55	2286 30	140 75	
Fumigation	149 00	271 60	122 60	
Agent	630 00	1697 50	1067 50	
Superintendent	1298 50	903 00		395 50
Registrar	644 85	591 15		53 70
Cremator	777 18	1122 35	345 17	
Children's Excursions		49 20	49 20	
Cleaning Snow from				
Streets	178 55			178 55
	<hr/>	<hr/>	<hr/>	<hr/>
	\$32,625 13	\$35,644 59	\$4,096 15	\$1,076 69

Decrease in amount of pay rolls in 1898, \$3,019 46.

BILLS IN 1898 COMPARED WITH 1897.

	1898	1897	Decrease	Increase
Hay.....	\$803 57	\$1433 75	\$630 18	
Corn.....	62 69	119 57	56 88	
Oats.....	1596 43	1167 13		\$429 30
Straw.....	127 38	111 00		16 38
	<hr/>	<hr/>	<hr/>	<hr/>
Am'ts carried forward	\$2,590 07	\$2,831 45	\$687 06	\$445 68

BILLS IN 1898 COMPARED WITH 1897. (Continued).

	1898	1897	Decrease	Increase
Am'ts brought for'ard	\$2590 07	\$2831 45	\$ 687 06	\$445 68
Stable (Sundries)..	856 55	1558 67	702 12	
New Horses.....		1350 00	1350 00	
Use of Horses.....	128 25	208 25	80 00	
Boarding and Keep- ing Horses.....	85 72	379 92	294 20	
New Harnesses....	89 50	162 00	72 50	
Repairing Harnesses	31 60	278 55	246 95	
" Wagons..	110 23	115 40	5 17	
Office (Sundries)...	575 81	733 48	157 67	
Printing Annual Re- port.....	98 28	72 00		26 28
Hardware.....	38 92	80 32	41 40	
Professional services				
Medical and Ve- terinary and Medi- cine.....	440 01	451 00	10 99	
Professional services				
Bacteriological...	502 50	422 50		80 00
Bacteriological De- partment.....	113 31	269 69	156 38	
Plumbing Commis- sion Services.....		67 40	67 40	
Telephone Services	230 56	263 27	32 71	
Temperature Read- ings.....	62 50	150 75	88 25	
Insurance.....		60 00	60 00	
Water Deparment..	79 53	90 34	10 81	
Small Pox Hospital	1 28	35 91	34 63	
Cremator....	867 03	1618 02	750 99	
	<u>\$6,901 65</u>	<u>\$11,198 92</u>	<u>\$4,849 23</u>	<u>\$551 96</u>

Decrease in amount of bills in 1898, \$4,297.27

MONTHLY BILLS OF THE HEALTH DEPARTMENT FOR THE YEAR 1898.

	1898	1897
January (unpaid bills of Dec. '97).....	\$194 74	
“	712 91	\$1001 32
February	727 27	795 93
March	441 13	777 89
April... ..	817 44	1013 74
May	407 58	1887 91
June	643 94	1131 22
July.....	390 76	1005 40
August	501 12	592 99
September	605 88	872 61
October	705 83	1103 83
November	454 94	482 72
December	298 11	533 36
	<hr/>	<hr/>
	\$6,901 65	\$11,198 92

ANALYSIS OF BILLS FOR 1898.

Hay.....	\$ 803 57
Corn	62 69
Oats	1596 43
Straw	127 38

Stable (Sundries):

Blacksmith supplies.....	\$338 10	
Harness repairing supplies.....	49 35	
Carpenter shop and other supplies .	122 75	
Lumber.....	105 70	
Gas	70 10	
Coal	65 49	
Stationery supplies	14 75	
	<hr/>	<hr/>
Amounts carried forward.....	\$766 24	\$2590 07

Amounts brought forward..... \$766 24 \$2590 07

Stable (Sundries):

Oil.....	9 40	
Towels	1 44	
Laundry work	4 41	
Ice	5 35	
Plumbing work	28 46	
Cleaning dry well.	4 00	
Duck covers for ash teams.....	18 00	
Jobbing	2 50	
Painting signs for wagons.....	15 00	
Shoeing horse.....	1 75	
	<hr/>	856 55
Use of horses		128 25
Boarding and keeping horses.. .		85 72
New harnesses		89 50
Repairing harnesses		31 60
Repairing wagons		110 23

Office (Sundries):

Fumigating supplies.....	\$121 73
Monthly bulletins.. ..	43 75
Subscription to paper.....	6 00
Car fare to Boston.....	1 20
Printed supplies (notices, etc.)...	102 65
Publishing plumbing rules.....	23 70
Sundry supplies.....	53 00
Supplies for plumbing test.....	6 74
Telephone Index.....	1 00
Hacks for visiting Boards of Health	15 00
Dinners for visiting Board of Health	2 00
Express.....	6 40
Stamps and stamped envelopes.. .	83 20

Amounts carried forward..... \$466 37 \$3,891 92

Office (Sundries):

Amounts brought forward.....	\$466 37	\$3,891 92
Replacing bedding destroyed in typhoid fever case.....	23 00	
Rent P. O. box.....	5 00	
Vaccine points for public vaccina- tion.....	50 94	
Burial of bones.....	6 00	
Assessments of Mass. Association of B. of H. and Plumbers.....	24 50	
	<hr/>	575 81
Printing Annual Report.....		98 28
Hardware.....		38 92
Professional services medical and public vaccination.....		283 86
Professional services veterinary and med- icine.....		156 15
Professional services bacteriological. ...		502 50
Bacteriological department supplies.....		113 31
Telephone service.....		230 56
Temperature readings.....		62 50
Water department.....		79 53
Small pox hospital.....		1 28
Cremator.....		867 03
		<hr/>
		\$6,901 65

RECEIPTS TO THE GENERAL TREASURY FUND FOR THE YEAR ENDING
DEC. 31, 1898.

	Sale of swill	Sale of ashes	Plumber's licenses	Sale of horse	Sale of wagon
January	\$378 76		\$4 50		
February	620 47	\$61 61			
March.....	205 40		3 00		
April.....	243 40		5 00		
May	212 00		4 50		
June	142 75		50	\$32 25	
July.....	94 75		2 50		
August	148 50		1 00		
September	184 50		4 50		20 45
October	203 00		50		
November	138 00	5 68	50		
December.....	505 00		6 00		
	<u>\$3,076 53</u>	<u>\$67 29</u>	<u>\$32 50</u>	<u>\$32 25</u>	<u>\$20 45</u>

Total receipts to the General Treasury Fund, \$3,229.02.

REVENUE, 1898.

Appropriation, 1898.....	\$34,000 00
“ for unpaid bills of 1897.....	194 74
“ November, 1898	7,300 00
Sale of horse to Commons Dept. and shoeing same....	52 00
“ condition powders to Commons Dept.....	6 00
Rebate on water bill.....	1 80
Total revenue, 1898,	<u>\$41,554 54</u>

EXPENDITURES, 1898.

Salaries.....	\$ 1,500 00
Pay rolls.....	32,625 13
Bills	<u>6,901 65</u>
Total expenditures, 1898,	<u>41,026 78</u>
Balance of appropriation,	\$527 76

BACTERIOLOGIST'S REPORT.

To the Members of the Board of Health,

Gentlemen,—I have the honor hereby to present the annual report of the work of the Bacteriological Laboratory for the year 1898.

The work now includes, examination for diphtheria and tuberculosis, typhoid fever by the Widal serum test and malaria.

DIPHTHERIA.

Cases of diphtheria and croup reported to the Board of Health.

	Diphtheria.	Croup.	Deaths.
January.....	23	0	5
February.....	12	0	0
March....	12	1	2
April.....	13	0	1
May.....	12	2	4
June.....	8	0	2
July.....	7	0	2
August.....	0	1	2
September.....	5	1	2
October.....	12	4	3
November.....	21	9	8
December.....	9	4	5
	—	—	—
Total.....	134	22	36

Mortality per cent. of diphtheria and croup, 23.

	1898	1897	1896	1895	1894
Diphtheria (including croup).....	156	176	110	120	47
Deaths.....	36	40	47	53	37

BACTERIOLOGICAL EXAMINATION FOR DIPHTHERIA.

		KLEBS-LOEFFLER BACILLUS	
		Present	Absent
Clinical diagnosis diphtheria.....	26		14
“ “ membraneous croup.....	1		1
“ “ laryngeal and spasmodic croup.....	0		2
“ “ tonsillitis.....	6		27
“ “ pharyngitis.....	0		6
“ “ doubtful.....	8		12
“ “ not stated... ..	14		33
Culture contaminated or improperly made....	0		9
Secondary examinations for release from quar- antine.....	5		4
	<hr/> 60		<hr/> 108

Total number of cases examined, 168.

ANTITOXIN TREATMENT OF DIPHTHERIA.

Cases Treated	Recovered	Died	Per Cent. of Deaths
72	62	10	14

The estimate of the cases in which antitoxin was used is still incomplete and unsatisfactory owing to the fact that many physicians fail to make cultures in the cases in which they use antitoxin, and neglect to fill out a report on each case, both of which are required by the State Board of Health as conditions for the furnishing of the antitoxin for treatment.

Few cultures also are sent in for secondary examination.

TUBERCULOSIS.

EXAMINATION OF SPUTUM.

Cases	TUBERCLE BACILLUS	
	Present	Absent
65	27	38

The dangerous and contagious character of the disease tuberculosis is now generally recognized. The bacteriological examination of suspected cases is of value, in the case of the patient for the early detection of the disease, warning him to seek proper treatment while there is still time; for the community it is a safeguard against the spread of the disease.

TYPHOID FEVER.

EXAMINATION BY THE WIDAL SERUM TEST.

Cases	REACTION	
	Positive	Negative
24	5	19

The application of the Widal test to suspected or doubtful cases of typhoid fever as an aid to diagnosis which was begun last year, continues to be an important and constant part of the work of the laboratory.

MALARIA.

Shortly after the return of our soldiers from the late war with Spain, bringing with them many severe forms of malaria, a number of physicians who were caring for them began to apply to the Board of Health for the examination of the blood of cases for the malarial organism. The Board of

Health, therefore, looking forward to a probable increase in the local malarial infection, arranged to have the necessary examination made.

Specimens of blood spread on thin glass cover slips and dried are received and examined for the presence of Plasmodium Malaria. In all, ten cases, mostly of soldiers, which have been examined, showed the presence of the organism.

Since the opening of the laboratory, four years ago, it remained in charge of Dr. Charles L. Fox until the time of his death, in October of this year. During that time its duties were increased four fold; starting with the examination of diphtheria alone, to this were added examination for tuberculosis, for typhoid fever and for malaria. Dr. Fox's scientific ability and his thorough and conscientious work in the Department were known and appreciated by every one, and his death is deeply regretted.

THOMAS B. SMITH, M. D.

Bacteriologist.

PAYSIKIAN'S REPORT.

To the Board of Health:

Gentlemen,—I have the honor to submit the following report of my work as physician, to the Board of Health for the year 1898:—

Number of vaccinations.	661
Examination into causes of deaths.....	96
“ of diphtheria.....	6
“ of scarlet fever.....	17
“ of scabies.....	4
“ of measles.....	2
“ of chicken pox.....	2
“ of parasitic eruption.....	2
“ of emigrant from steamer on which was small pox.....	1
Number of school houses visited.....	10

In addition to the foregoing my labors in connection with the epidemic of scarlet fever in May last, but for the timely efforts of the Board of Health and State Inspector T. O. Allen, would have been very serious in its consequence, are recorded in my report made to the Board on May 14th, a copy of which is as follows:—

(COPY.)

MAJOR ALLEN, State Inspector,—

I herewith enclose a report of the condition of the members of Mr. Oliver J. Coburn's household and of his premises in Dracut, scarlet fever having appeared on his premises.

In the early part of April Arthur Maddox and Ben. Robertson came from Maine to work for Mr. Coburn as farm-hands. Two days after their arrival Maddox complained of sore throat. A physician was called, but as no eruption was percep-

tible the diagnosis of scarlet fever could not at this time be made. Within a few days this man commenced to work again. About this time his brother, who roomed with him, had an inflamed throat with a slight eruption on his chest. No doctor was called for him. Five men were employed about the farm, all of whom did more or less of the milking up to May 7th, and three of the five had scarlet fever, the other two having had the disease in childhood. I examined the Maddox brothers and found peeling completed, with the exception of the feet, and on them disquamation was still going on. One of the brothers was sent to the hospital as convalescent from scarlet fever on account of an abcess in his throat; the other was isolated.

The oldest Coburn boy, aged 12, is confined to bed with the scarletinal rash well developed over his body. A younger brother and a young woman had had some sore throat, but no rash or peeling was perceptible in either case. The boy had been previously isolated by his physician, and a special nurse provided for him.

The other case — a farm hand — had returned on May 9th to Maine; but he is said to have had the same symptoms as the Maddox boys.

On account of the prevalence of scarlet fever in Lowell, the Lowell Board of Health caused a rigid examination into the source of the infection;

and, owing to the prevalence of the disease in the families using Mr. Coburn's milk, an inspector was sent to Mr. Coburn's farm on May 7th, and while there interviewed the physician in attendance on the Coburn boy, and learned from him that the case was scarlet fever. This information caused the Lowell Board of Health to place the matter in the hands of State Inspector Allen, who at once prohibited the sale of milk, isolated those persons who had had scarlet fever, personally saw that the walls and ceilings were washed with lime and corrosive sublimate, the floor cleaned and freshly sawdusted, fumigated the milk-room and infected sleeping rooms.

After the milk is strained, which is done in a room adjoining the barn, and away from the house, it is carried to a cooling house 100 yards or more away from the premises. In view of these facts I consider the milk hereafter sold from that farm free from infection.

In conclusion, I am convinced that Mr. Coburn has done all in his power to aid you in efforts which you have instituted to exterminate the infection which is capable of doing so much injury to the public health.

WILLIAM A. JOHNSON, M. D.

Lowell, Mass., May 14, 1898.

(COPY.)

DR. S. W. ABBOTT, Secretary State Board of Health.

Dear Sir,—I have the honor to herewith submit a report of the scarlet fever cases in the town of Dracut and Lowell.

On Sunday, May 8th, late in the afternoon, I was informed by Inspector Bates of the Health Department that there were cases of scarlet fever on the farm of Oliver J. Coburn, in Dracut. Monday morning early I went with Inspector Bates to the farm. We found that there was one child sick, two men had been sick, but were well enough to work. Mr. Coburn runs a milk route in the city of Lowell, and raises all his milk from about fifty cows. I told him he could bring no more milk into the city until his place had been placed in a thoroughly sanitary condition, and suggested that he send all the sick to the hospital, fumigate his house, barn, and all the premises used for milk. He was very anxious to comply with all requirements, and immediately set to work to whitewash his barn with lime and corrosive sublimate. In the meantime he bought his milk for delivery from other farmers, and fed his own milk to hogs, of which he had about one hundred. It being in Dracut, I asked him to have the Board of Health of Dracut attend to the house, as Dr. Harrington, of the Lowell

Board, said they would be satisfied with what the Dracut Board did. I went out Tuesday afternoon with Inspector Bates, and found that the barn had been whitewashed, but nothing had been done about the sick people. I immediately came back to Lowell and got Dr. W. A. Johnson and took him out there. He examined every person on the place thoroughly,—eleven in all. (I enclose his report.) I saw the chairman of the Dracut Board of Health; he said anything Dr. Johnson did would be satisfactory to them. As near as I can find out there have been sixteen cases in fifteen families of scarlet fever reported in Lowell where the families took milk of Coburn. There are also two cases in Dracut. There are many more cases reported which probably indirectly came from this milk.

Of the two men who were the cause of this trouble, one is in the hospital, the other is isolated, he being well enough to work on the farm.

I think the place is in a perfectly sanitary condition now, and have allowed him to sell his milk in Lowell hereafter. Mr. Coburn paid all expenses, so there will be no cost to the state or city.

Mr. Coburn has been very anxious and willing to do any and everything he could to forward the matter. He did not know himself, until Saturday night, that the sickness was scarlet fever,

as his physician, Dr. Colton, did not decide it was scarlet fever until that time.

On May 11th there were four cases reported, one on the 12th and none on the 13th so I think we can safely say the danger from that milk supply is surely passed.

I desire to recommend the zeal and efficiency with which Inspector F. A. Bates of the local Health Board has assisted me in this work.

THOS. O. ALLEN,
State Inspector.

REPORT OF INSPECTOR BATES.

To the Board of Health.

Gentlemen,—The Inspector of Contagious Diseases respectfully makes the following report:—

NUMBER OF CASES REPORTED FOR THE YEAR ENDING DECEMBER 31, 1898.

Typhoid fever.	119
Scarlet fever.	309
Diphtheria.	134
Membranous croup.	22
Measles.	33
<hr/>	
Total cases investigated.	617
Number of houses placarded.	451
“ of fumigations.	447
“ removed to the hospital.	19
“ of funerals attended of persons that died of scarlet fever or diphtheria.	38

The investigation of a case reported means, go to the house where the case is reported, get the name, age and occupation of the person; discovery of disease; name of milkman; condition of plumbing at residence; water closet or vault; water used; what school the children attend; leave printed instructions of the Board and placard premises; notify the Superintendent of the Yard to collect the swill in the cases of scarlet fever, diphtheria, membranous croup and measles.

The second and third visit is necessary in many cases to see that the instructions are lived up to.

On Saturday, week ending May 7th, out of twelve cases of scarlet fever reported, I found that six of them were on the route of one milk man, and I went to his farm that evening to see if any of his milk raisers had scarlet fever; I found his family physician there, told him why I had come, and he said that one of the children had just come down with scarlet fever and he thought that some of the hired help had got scarlet fever. I reported to the Board what I found and May 9th went with the Milk Inspector to said farm and he ordered him to stop delivering milk in Lowell for the time being.

On May 10th the Board of Health Physician examined the men on the farm and found two of them recovering from scarlet fever, and the

men were sent to the hospital by his order. The farmer was ordered by Inspector Allen to clean and disinfect the barn before he could deliver milk in Lowell, which he did under said Inspector's supervision.

There were fifty-five cases on this route in May and nine in June, the June cases being all the first part of the month.

On October 1st word was received from C. H. Miller, selectman of Pepperell, that a person by the name of Parker, suspected of having scarlet fever, had left Pepperell and he thought for Lowell; and on October 2nd he walked into St. John's Hospital and said he had tonsillitis, but was found to be suffering from scarlet fever and was removed to the Lowell Hospital by the Health Department.

There have been three cases of diphtheria at the Ayer Home, and one died.

Three children have been taken sick with scarlet fever at St. John's Hospital; the first case was a child that had been in the hospital three months for surgical treatment. The cases were isolated in the home on Bartlett street.

Besides looking after the contagious diseases, I have served twenty-nine legal notices as constable; investigated fifty-four complaints that were made at the office and held myself in readiness at all

times to obey any requests from members of the Board.

Respectfully submitted,

FREDERICK A. BATES,

Inspector.

REPORT OF INSPECTOR GARRITY.

To the Honorable Board of Health :

Gentlemen,—I have the honor to submit the following report of work done by me for the year ending Dec. 31, 1898.

Whole number of plumbing applications received,	425
Number of new buildings.....	160
“ of old buildings.....	265
	— 425
Water closets inspected.....	690
Sinks “	386
Wash basins “	241
Bath tubs “	262
Wash trays “	98
Changes from dry well to sewer.....	18
Complaints investigated.....	45

Inspection of bakeries on Mt. Hope, Mammoth Road, Lilley avenue, Hovey and Ludlam streets. Inspection of vaults on Barker avenue, Lilley avenue, Bridge, Main and London streets, to which frequent visits were made.

There was one prosecution, that of Joseph Denault, for doing plumbing without a license and a fine of six dollars (\$6.00) was imposed. Now, while there may be some persons doing plumbing work without a license, it is very difficult to catch them and I have to depend upon the person having the work done to let me have the receipted bill as evidence in court.

In making the new rules, provision has been made which, I think, will obviate this trouble, Rule 2, page 5, and Rule 21, page 14, "Final Test." In conclusion would say that while I am always willing to do whatever is asked by the Board, still, I would most respectfully ask that I be relieved from doing any work that would conflict with my duties as Plumbing Inspector, and that beginning with the new year I be given an opportunity to attend solely to the plumbing work, to the end that there may be a more rigid enforcement of the plumbing laws. Trusting the above report and suggestions will meet with your approval, I remain,

Yours respectfully,

STEPHEN GARRITY.

Plumbing Inspector.

PLUMBING COMMISSION.

The Plumbing Commission met for organization Tuesday, Oct. 11, 1898, in the office of the Board

of Health, and E. H. Packer, M. D., was elected chairman, and Stephen Garrity was elected secretary, with William T. True, inspector of buildings, as the third member.

Whole number of applicants for examination.....		6
Successfully passed.....	4	
Not completed.....	1	
Failed to pass.....	1	6

Respectfully submitted,

STEPHEN GARRITY,

Secretary.

REPORT OF INSPECTOR CONNORS.

To the Members of the Board of Health:

Gentlemen,—I have the honor to submit the following report of work done by me for the year ending Dec. 31, 1898:—

Tenements inspected.....	1611
Stores “	100
Sinks “	1758
Water closets “	1312
Vaults	75
Baths tubs.....	377
Basins	307
Cellars	925
School houses.....	1
Yards	1225
Soda Wastes.....	3

Refrigerators	40
Urinals	15
Hen houses	65
Laundries	3
Pig pens	12
Set tubs	150
Ash chutes	5
House drains	705
Barns	115
Bakeries	30
Cesspools	21
Cows	3
Slop sinks	11
New plumbing	17
Complaints investigated	80

Dec. 7, 1898, at your request, I attended the disinterment of the bodies of Walter H. and Lewis Caddell at the Edson cemetery. The undertaker, Mr. Weinbeck, furnished a canvas covering 16 feet square, 1 pound of bi-chloride of mercury, a barrel of water and sprinkling can; every particle of earth as it was thrown on the canvas covering was sprinkled with a solution of mercury. The bodies were placed in a metal lined box and sealed by a plumber and the canvas covering was carried to the cremator and burned in my presence.

Respectfully,

WILLIAM H. CONNORS.

REPORT OF INSPECTOR O'HARE.

To the Board of Health:

Gentlemen,—I have the honor to present to you my report as sanitary inspector for the year 1898:—

Tenements inspected.....	1658
Cellars “	1160
Yards “	865
Water closets “	1677
Sinks “	1710
Basins “	299
Bath tubs “	370
Wash trays “	131
Refrigerators “	12
Slop sinks “	6
Corn beef tanks.....	5
Stores inspected.....	46
Bakeries “	24
House drains inspected.....	798
Junk shops “	4
Barns “	114
Vaults “	136
Cesspools “	6
Pig pens “	14
Hen houses “	46
Houses carded.....	7
Complaints investigated	65

The house to house inspection was continued on the following streets:—Bellevue, Thayer, Barclay, Cheney Place, Horne, Lane, School, Osgood,

Hastings, Liberty, Arthur, Sagamore, Shaw, Burgess, Grace, South Loring, South Walker, Warwick, Wilder, Stevens, Harding, Corner, New Fletcher, Hazeltine, Frye, Hubbard, A, B, C, D, E, Puffer, Spaulding, Winthrop avenue, Parker, Emery, Inland, Midland, Forrest, Jenness, Coburn avenue, Upham, Victoria, Albert, Chelmsford from Plain to city line, Doane, Newell, Westford from Smith to Marlborough, Edson, Chester, Windsor, Burt, Robbins and Belmot streets.

SPECIAL INSPECTIONS.

Detailed with Inspector Connors for an inspection of A. C. Wheelock's property from April 11th to May 16th inclusive. Made usual spring inspection of yards from April 18th to May 10th. Detailed with Inspector Garrity on an inspection of the sewers, manufacturing establishments and private drains that drained sewage into Hale's Brook from July 19th to 23rd.

Respectfully submitted,

F. J. O'HARE.

REPORT OF THE SUPERINTENDENT.

REPORT OF YARD DEPARTMENT OF BOARD OF HEALTH FOR 1898.

Number of loads of swill collected..... ..		3665½
“ “ sold..... ..	2596	
“ “ cremated..... ..	873	
“ “ dumped..... ..	196½	
	<hr/>	<hr/>
		3665½

REVENUE.

Received from sale of swill..... ..	\$2622 15
“ “ ashes..... ..	19 68
“ “ horse to Com'ons dept.	50 00
“ “ sundries..... ..	2 00
“ for labor..... ..	1 00
“ from Pevey Bros. for old iron.....	5 05
“ for manure..... ..	1 00
“ “ shoeing horse for Commons dept.	9 05
	<hr/>
	\$2709 93

Cash paid to City Treasurer..... ..	\$2274 90
Bills for collection..... ..	435 03
	<hr/>
	2709 93

Cleaning snow Feb. 23, 1898..... ..	\$178 55	
At auction 1 Democrat wagon..... ..	16 27	16 27
“ 1 Concord wagon..... ..	20 45	20 45
	<hr/>	<hr/>
		\$2746 65

NUMBER OF LOADS OF ASHES, RUBBISH AND PAPER COLLECTED
DURING THE YEAR 1898.

January	2513	loads
February.....	2506	"
March	3209	"
April	2410	"
May	2300	"
June.....	2348	"
July	1711	"
August.....	1621	"
September.....	2416	"
October.....	1950	"
November	2340	"
December	2821	"

Total..... 28,145 loads

JOHN F. MURPHY, Superintendent.

REPORT OF W. A. SHERMAN. D. V. S., M. D.

To the Board of Health, City of Lowell, Mass.

Gentlemen,—Since the first day of January, 1898, in my duties as inspector of animals and provisions, I have examined at slaughter house two bulls, twenty-one cows, twenty-eight calves, and five pigs, of which one cow was diseased and sent to be rendered.

I have sent to be rendered three horses affected with glanders.

I have had destroyed two dogs with symptoms of rabies.

I have indentified and released from quarantine one hundred and sixty cows.

Respectfully submitted,

W. A. SHERMAN, D. V. S., M. D.

Inspector of Animals and Provisions.

The following is a schedule of property of the Health Department at the stable:—

21 horses valued at.....	\$1800 00
1 ambulance.....	175 00
1 hospital wagon.....	25 00
4 double ash carts.	450 00
8 single ash carts.....	720 00
4 double sleds.....	300 00
14 single ash and swill sleds....	700 00
1 double swill wagon.....	100 00
9 single swill wagons.....	450 00
1 coupe.....	75 00
2 paper wagons.....	100 00
2 sleighs.....	25 00
2 pungs.....	35 00
1 steel wagon.....	25 00
2 Concord wagons.....	100 00
1 Goddard buggy.....	100 00
1 covered sleigh.....	50 00
Harnesses and equipments, supplies, etc.....	800 00
Tools, etc., at stable.....	200 00
Supplies at carpenter shop.....	325 00
“ at blacksmith shop.....	500 00
	<hr/>
	\$7,055 00

AT CREMATOR.

1 Engle Cremator	\$3000 00
15 tons ashes.....	120 00

The foregoing report respectfully submitted,

THOMAS F. HARRINGTON, M. D.,

THOMAS J. MULLIGAN,

EDMUND H. PACKER, M. D.,

Board of Health.

TABLE SHOWING DEATHS IN EACH MONTH AND YEAR FOR THE PAST TWENTY-ONE YEARS.

Months	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
January	64	105	107	84	115	113	124	103	105	172	158	149	246	160	306	191	178	137	124	144	125
February	78	69	93	103	82	91	108	121	100	161	132	124	137	156	200	155	160	174	143	155	119
March	104	78	125	109	91	102	121	107	150	163	152	127	130	185	197	202	150	168	170	173	141
April	84	83	103	111	105	122	110	114	125	180	166	182	165	150	184	177	130	162	175	117	137
May	82	73	90	101	112	100	98	99	121	162	124	144	157	161	155	192	117	107	117	153	131
June	78	70	123	86	99	118	87	105	116	133	107	176	114	144	145	146	116	135	131	125	135
July	137	108	135	144	137	156	143	134	155	205	189	186	220	207	229	258	203	198	237	174	226
August	127	97	146	146	137	139	136	137	161	182	180	196	200	195	204	205	155	176	223	201	203
September	121	75	184	184	127	152	131	106	124	138	153	182	157	173	177	161	153	162	157	162	169
October	78	92	97	97	118	102	107	99	116	130	149	145	129	153	145	121	147	156	157	154	151
November	58	74	89	93	81	105	106	107	96	123	113	120	138	119	119	116	126	136	126	145	116
December	82	82	90	105	113	120	110	97	130	123	141	168	166	169	163	168	140	146	141	152	155
Totals	1094	1005	1363	1363	1327	1420	1380	1329	1499	1872	1763	1899	1959	1972	2224	2095	1775	1857	1901	1855	1808

TABLE SHOWING RAINFALL IN INCHES BY MONTHS FOR TWENTY-ONE YEARS, 1878-1898.

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1878.....	5.279	5.310	4.354	8.139	0.587	3.048	2.186	10.760	0.887	5.383	6.713	5.923	58.575
1879.....	2.475	3.762	5.013	4.030	2.279	5.700	4.378	6.176	2.167	1.434	3.364	4.465	45.262
1880.....	4.339	3.944	3.005	2.375	2.676	1.702	6.518	3.156	1.339	2.823	1.841	2.581	36.519
1881.....	5.338	3.151	7.210	1.855	4.274	4.900	2.446	1.751	2.730	1.962	4.282	4.253	44.182
1882.....	4.527	5.773	3.019	1.674	4.904	2.789	1.677	0.984	7.313	2.312	1.011	2.027	38.610
1883.....	2.923	3.465	1.885	1.895	4.640	2.036	3.583	0.909	1.487	5.292	1.739	2.623	32.418
1884.....	4.944	5.763	5.013	4.110	3.684	3.064	3.198	3.977	0.924	1.945	2.328	5.149	44.039
1885.....	4.836	4.095	1.022	3.606	3.589	4.233	6.026	6.098	1.581	4.811	5.183	2.811	48.001
1886.....	6.765	6.335	3.388	1.966	3.587	1.859	3.512	3.128	3.963	2.781	4.901	4.444	46.829
1887.....	5.720	5.182	4.738	4.046	1.644	2.608	5.425	10.931	2.228	3.116	3.270	4.547	53.445
1888.....	4.661	4.307	6.519	3.782	3.890	2.809	3.637	4.837	7.966	6.780	5.982	5.365	59.915
1889.....	5.037	1.710	1.038	3.830	3.889	2.592	6.102	3.979	3.266	4.268	6.929	3.366	46.756
1890.....	2.766	3.767	6.833	1.987	5.669	3.530	3.447	4.856	4.457	7.765	1.584	4.466	51.067
1891.....	7.041	3.840	5.953	3.564	2.289	3.659	2.969	1.966	1.897	2.926	1.913	3.204	41.131
1892.....	5.389	2.742	2.043	0.628	5.861	4.444	2.321	4.304	1.973	1.378	5.829	1.166	38.618
1893.....	2.392	7.763	2.439	2.946	4.900	2.414	2.696	3.944	2.293	3.825	1.933	5.460	42.945
1894.....	3.319	3.502	1.298	3.757	4.359	0.372	2.998	0.925	3.027	3.461	3.519	3.838	34.375
1895.....	3.306	1.471	2.656	4.569	1.782	2.631	2.639	2.017	2.230	6.674	8.165	3.172	41.332
1896.....	2.243	4.649	6.310	1.335	2.316	2.683	3.786	2.759	9.066	2.965	3.023	1.126	42.291
1897.....	4.351	2.958	4.146	2.248	4.945	6.106	4.619	5.630	3.037	0.592	6.487	5.320	50.439
1898.....	8.124	3.457	1.652	5.201	3.053	3.649	2.930	8.226	1.970	6.846	6.447	2.744	54.289

TABLE OF CONTENTS.

Membership.....	3
Organization	5
Disposal of city garbage.....	10
Water supply.....	18
Medical inspection.....	20
Contagious Disease Hospital.....	22
Bacteriological Department.....	25
Public morgue.....	26
Undertakers' licenses.....	27
Disinterment of bodies	27
Infectious diseases.....	29
Diphtheria	33
Scarlet fever.....	34
Tuberculosis.....	34
Public expectoration.....	36
Cholera infantum.....	36
Measles.....	37
Public Sanitation Day.....	37
Stable licenses.....	38
Milk inspection.....	38
Vital statistics.....	39
Places of death.....	40
Places of interment	41
Death rate.....	41
Principal causes of death.....	41
Deaths from cholera infantum.....	42
Table of statistics on contagious diseases.....	43
Deaths classified.....	44
Largest week's work.....	49
Cost of burning garbage, 1898.....	49
Financial statement.....	50

Pay Rolls in 1898 compared with 1897...	53
Bills in 1898 compared with 1897.....	53
Monthly bills.....	55
Analysis of bills for 1898.....	55
Receipts to the general treasury fund.....	58
Revenue, 1898.....	58
Expenditures, 1898.....	58
Bacteriologist's report...	59
Diphtheria.....	59
Bacteriological examination for diphtheria.....	60
Antitoxin treatment of diphtheria.....	60
Tuberculosis—examination of sputum.....	61
Typhoid fever—examination by the widal serum test.....	61
Malaria.....	61
Physician's report.....	62
Report of Inspector Bates.....	68
Report of Inspector Garrity.....	71
Plumbing Commission.....	72
Report of Inspector Connors.....	73
Report of Inspector O'Hare.....	75
Report of the Superintendent.....	77
Report of W. A. Sherman, D. V. S., M. D.....	78
Schedule of property at the stable.....	79
Table showing deaths per month for twenty-one years.....	81
Table showing rainfall for twenty-one years.....	82

ANNUAL REPORT

OF THE

INSPECTOR OF MILK AND VINEGAR

OF THE

CITY OF LOWELL,

For the Year 1898.



LOWELL, MASS. :

LOWELL SUN PRINT, SUN BUILDING,

1899.

REPORT.

*To His Honor the Mayor, and the Board of Aldermen
of the City of Lowell:*

GENTLEMEN:—I have the honor to submit my eighth annual report as Inspector of Milk and Vinegar.

The work of the department has been continued on the same lines as last year, by the chemical analysis of all samples of milk, vinegar and butter taken, and many that have been brought in. There have also been many samples of water analyzed; the biological work has also been continued, and many samples of milk and water have been examined for bacteria.

The duties of the Inspector, as defined by statutes under which he acts, are the issuing of licenses, the registration of stores where milk is sold, collection and inspection of samples, and the enforcement of the law in the courts.

The statistics of the office and the detail of the work performed will be found under the proper headings.

LICENSES.

The statutes require the Milk Inspector to license every person who conveys milk, in carriages or otherwise, for the purpose of selling the same, annually, on the first day of May, or within thirty days thereafter, and that they shall pay fifty cents for the use of the City. The statutes also require all stores, booths, stands or market places, before selling milk, to register in the books of the Inspector and pay fifty cents, which fee is paid but once. Licenses are issued only in the name of owners, and may not be sold, assigned or transferred. Each license records the name, residence, place of business, number of carriages or other vehicles used, the name and residence of every driver or other person engaged in the carrying or selling and the number of the license. The licensee is required to cause his name, the number of his license, and his place of business to be legibly placed on each outer side of all carriages or vehicles used by him in the sale and conveyance of milk or oleomargarine, and to report to the

Inspector any change of driver or other persons employed; for failure to comply with these requirements, or for selling or exposing for sale from carriages or other vehicles, without first being licensed, a fine of not less than thirty nor more than one hundred dollars may be imposed. Failure to register for the sale of milk from store, booth, stand, or market place is punishable by a fine not exceeding twenty dollars.

Number of licenses to dealers conveying milk by carriages or otherwise for the purpose of sale.....	164
Number of registration of store keepers engaged in the sale of milk.....	84
<hr/>	
Total number of licenses and registration	248
Amount turned over to City Treasurer for licenses.....	\$124

INSPECTION.

It is the duty of the Inspector or Collector to enter all places where milk is stored, or kept for sale, and take samples for analysis. It is the custom of the Inspector to take samples from wagons and stores in about the same proportion. There are also many samples brought in by citizens which are analyzed free of charge.

In most instances where milk taken from stores has not been up to the legal standard, warnings have been issued, and in almost every case they

have caused an improvement in the quality of milk sold. It is the custom to pay for milk taken from stores, but not for that taken from wagons.

Total number of milk inspections	2086
Total number of warnings sent for milk.....	38

COMPLAINTS.

The statutes provide penalties:

For neglecting or refusing to license or register for sale of milk.

For selling or exposing for sale, adulterated milk, milk to which water or any foreign substance has been added, milk not of standard quality, milk produced from sick or diseased cows, or milk produced from cows fed on the refuse of distilleries.

For selling, or offering for sale, as pure milk, milk from which the whole or any part of the cream has been removed.

For selling skimmed milk, unless from cans or other vessels marked as required by statute.

For selling, or exposing for sale, possessing with intend to sell, milk or skimmed milk which is not of standard quality, *i. e.*, containing less than thirteen per cent. of milk solids, in case of whole milk; or less than nine and three-tenths per cent. of milk solids, exclusive of fat, in case of skimmed

milk, except in the months of April, May, June, July and August, when the standard is twelve per cent. for whole milk, and nine per cent. in case of skimmed milk.

For obstructing in any manner the Milk Inspector or his assistants, in the performance of their duties.

For the sale, or exposure for sale, as cider vinegar, vinegar which is not made exclusively of apple cider.

For the sale, or exposure for sale, of vinegar containing any artificial coloring matter, or containing any preparation of lead, copper, sulphuric acid or any ingredient injurious to health.

For the sale of any vinegar not of standard quality, *i. e.*, containing less than four and one-half per cent. of absolute acetic acid, or, in the case of cider vinegar, containing less than two per cent. by weight, of cider vinegar solids.

It is the duty of the Inspector to make complaint for any of the offences thus enumerated, which may be brought to his notice as a result of his analysis of samples, or on the information of any person who lays before him satisfactory evidence upon which to sustain such complaint.

STANDING OF MILK.

The following is the average standing of the samples of milk analyzed each month.

TOTAL SOLIDS.

	From Wagons.	From Stores.
January.....	13.31 per cent.	12.76 per cent.
February.....	12.99 "	13.52 "
March.....	13.05 "	13.40 "
April.....	12.66 "	
May.....	12.52 "	
June.....	12.67 "	13.40 "
July.....	12.68 "	11.73 "
August.....	12.94 "	
September.....	12.35 "	13.17 "
October.....	13.28 "	13.62 "
November.....	13.40 "	13.36 "
December.....	13.34 "	13.65 "

The supply comes from the surrounding towns.

VINEGAR.

In March, the Inspector sent out for samples of vinegar, and collected 191 samples, mostly from the grocers and small stores; they were found to be deficient in solids, and 151 notices were sent. Many of the parties came to the office and were informed where the trouble lay. The wholesalers also came and had some of their stock analyzed, and most of them remedied the trouble at once, so that it is rare to find a sample not up to the

standard now; there was no intention to evade the law, most of it being sold as it was purchased, and mostly from reliable dealers. There were no prosecutions.

Many dealers have had their stock analyzed since that time to be sure it was up to the standard.

Total number samples analyzed.....	274
Number warnings sent	151

WATER.

The Inspector has analyzed 128 samples of water, mostly from wells in the city.

SCARLET FEVER CAUSED BY INFECTED MILK.

On May 8th, my attention was called by Inspector F. A. Bates, of the Health Department, to the cases of scarlet fever on the milk route of Oliver J. Coburn in Dracut. I copy below my report on the cases, also the report of Dr. Wm. A. Johnson, who was associated with me in the work, and gave it untiring attention; that it was detected and stamped out in the early stages is a source of gratification, and much of this is due to the untiring energy of Dr. Johnson.

REPORT.

DR. S. W. ABBOTT, Sec'y State Board of Health.

Dear Sir:—I have the honor to herewith submit my report of the scarlet fever cases in the town of Dracut and in Lowell.

On Sunday, May 8th, late in the afternoon, I was informed by Inspector Bates of the Health Department, that there were cases of scarlet fever on the farm of Oliver J. Coburn in Dracut.

Monday morning early, I went with Inspector Bates to the farm; we found that there was one child sick, two men had been sick, but were well enough to work. Mr. Coburn runs a milk route in the city of Lowell and obtains all his milk from about fifty cows. I told him he could bring no more milk into the city until his place had been placed into a thoroughly sanitary condition, and suggested that he send all the sick to the hospital, fumigate his house, barn, and all the premises used for milk. He was very anxious to comply with all requirements and immediately set to work to wash his barn with lime and corrosive sublimate. In the meantime he bought his milk for delivery from other farmers and fed his own milk to his hogs, of which he had about one

hundred. It being in Dracut, I asked him to have the Board of Health of Dracut attend to the house, as Dr. Harrington of the Lowell Board said they would be satisfied with what the Dracut Board did.

I went out Tuesday afternoon with Inspector Bates and found the barn had been 'whitewashed, but nothing had been done about the sick people. I immediately came back to Lowell and took Dr. Wm. A. Johnson out there. He examined every person on the place thoroughly, eleven in all. I saw the chairman of the Dracut Board of Health; he said anything Dr. Johnson did would be satisfactory to them.

As near as I could ascertain there have been reported sixteen cases of scarlet fever in fifteen families in Lowell when the families took milk of Coburn. There are also two cases in Dracut. There are many more cases reported which probably came indirectly from this milk. Of the two men, who were the cause of this trouble, one is in the hospital, the other is isolated, he being well enough to work on the farm. I think the place is in a perfectly sanitary condition now, and have allowed him to sell his milk in Lowell hereafter.

Mr. Coburn has been very anxious and willing to do anything and everything he could to forward the matter. He did not know himself until Saturday night that the sickness was scarlet fever, as his physician, Dr. Colton, did not decide it was scarlet fever until that time.

On May 11th there were four cases reported, one on the 12th, none on the 13th, so I think we can safely say the danger from that milk supply is surely past.

I desire to recommend the zeal and efficiency with which Inspector F. A. Bates, of the local Health Board has assisted me in this work.

(Signed) THOS. O. ALLEN,

State Inspector.

Lowell, May 14, 1898.

DR. W. A. JOHNSON'S REPORT.

MAJOR THOS. O. ALLEN, State Inspector.

Dear Sir:—I herewith enclose a report of the condition of the members of Mr. Oliver J. Coburn's household and premises in Dracut, scarlet fever having appeared on his premises.

In the early part of April, Arthur Maddox and Ben Robertson came from Maine to work for Mr. Coburn as farm hands. Two days after their arrival Maddox complained of sore throat. A physician was called, but as no eruption was perceptible, the diagnosis of scarlet fever could not at that time be made. Within a few days this man commenced work again. About this time his brother who had roomed with him had an inflamed throat with a slight eruption on his chest. No doctor was called for him. Five men were employed about the farm, all of whom did more or less of the milking up to May 7th, and three of the five had scarlet fever, the other two having had the disease in childhood. I examined the Maddox brother and found peeling completed, with the exception of the feet and on them desquamation was still going on.

One of the brothers was sent to the hospital as a convalescent from scarlet fever on account of an abscess in his throat, the other was isolated.

The oldest Coburn boy, aged twelve, is confined to bed with the scarlatina, rash well developed over his body. A younger brother and a young woman has had some sore throat, but no rash or peeling was perceptible in either case. The boy

had been previously isolated by his physician and a special nurse provided for him.

The other case, a farm hand, had returned on May 9th to Maine, but he is said to have had the same symptoms as the Maddox boys.

On account of the prevalence of scarlet fever in Lowell, the Lowell Board of Health caused a rigid investigation into the source of the infection, and owing to the prevalence of the disease in the families using Mr. Coburn's milk, an inspector was sent to Mr. Coburn's farm on May 7th, and while there interviewed the physician in attendance on the Coburn boy and learned from him that the case was scarlet fever. This information caused the Lowell Board of Health to place the matter in the hands of State Inspector Allen, who at once prohibited the sale of milk, isolated those persons who had scarlet fever, personally saw that the walls and ceilings were washed with lime and corrosive sublimate, the floor cleaned and freshly sawdusted, fumigated the milk room and infected sleeping rooms.

After the milk is strained, which is done in a room adjoining the barn and away from the house, it is carried to a cooling house one hundred yards or more away from the premises.

In view of these facts I consider the milk hereafter sold from that farm free from infection.

In conclusion, I am convinced that Mr. Coburn has done all in his power to aid you in the efforts which you have instituted to exterminate the infection, which is capable of doing so much injury to the public health.

(Signed) WM. A. JOHNSON, M. D.

Lowell, May 14, 1898.

ASPHALT.

On the twentieth day of October, His Honor the Mayor, handed me a substance that was being used on Aiken Street, by the Dunn Brothers for paving that street. At the same time he give me a piece of native asphalt; he asked me to determine whether the substance used was native asphalt. I analyzed it to the best of my ability and could find no native asphalt in it. I was not satisfied, as I had never before done work of that kind, and asked His Honor to allow me to take it to a chemists in Boston for analysis; he give his consent and I took it to Dr. B. F. Davenport, a noted chemist of Boston. I submit his report.

MR. T. O. ALLEN, Milk Inspector, Lowell, Mass.

Dear Sir:—"I have carefully examined your sample of street pavement pitch and compared it with the asphalt sample. I find it could contain little if any of a like asphalt, but that it was about all a pitch probably from petroleum, as I found little indication of coal tar in it."

Yours respectfully,

(Signed) BENNETT F. DAVENPORT.

I immediately sent the report to the Mayor. Some time after, in conversation with the City Engineer, George Bowers, Esquire, he told me the contract called for from 12 to 15 per cent. of asphalt with the sand for the top dressing. He had a piece in his office which I analyzed and found it to contain much less. I immediately notified the Mayor, and he sent to the street and had a piece cut out and brought to my office for analysis; after that I took samples myself on the street as it was dumped from the carts, and samples were brought in by Mr. Cheney, the Superintendent of Streets. The following is a statement of the analysis:

		Per cent. of Sand.	Pitch.
November 7.			
No. 1.	Small sample sent by His Honor the Mayor.....	90.50	9.50
No. 2.	Taken from a block that had been laid 112 inches from the top	92.00	8
No. 3.	Taken from same block, top edge.....	92.34	7 66
No. 4.	Taken by T. O. Allen from a load just dumped on Aiken st..	93 65	6 35
No. 5.	Same sample as No. 4 analyzed by Mr. Cyrus W. Irish.....	93.56	6.44
November 10.	Brought in by Mr. Cheney.		
No. 1.	Sand, 91.93 per cent. Pitch,	8.07	per cent.
No. 2.	" 92.17 " " "	7.83	"
No. 3.	" 92.40 " " "	7 60	"
November 12.	Sent by Mr. Cheney.		
No. 1.	Sand, 92.65 per cent. Pitch,	7 35	per cent.
No. 2.	" 92.74 " " "	7.26	"
No. 3.	" 92.58 " " "	7 42	"
No. 4.	" 92.65 " " "	7.35	"
No. 5.	" 92.45 " " "	7 55	"
No. 6.	" 92.57 " " "	7.43	"
November 14.	/		
No. 1.	" 91.71 " " "	8 29	"
No. 2.	" 93.44 " " "	6.56	"
November 14.	Samples of concrete sent by the Mayor.		
No. 1.	In large bottle, Sand, 85.34 p. c. Pitch,	14.46	p. c.
No. 2.	In small bottle, " 86.78 " " "	13.52	"

The last two samples were analyzed with the assistance of Mr. Cyrus W. Irish.

In conclusion, I desire to thank His Honor the Mayor, for his advice and assistance in my work, which, for the past year has been greater than before, as my assistant was relieved on the first day of April, and the laboratory work, as well as the collections, have been done by me alone.

Respectfully submitted,

THOS. O. ALLEN,

Inspector of Milk and Vinegar.

Lowell, January 5, 1899.

ANNUAL REPORT
OF THE
SUPERINTENDENT OF STREETS
OF THE
CITY OF LOWELL,
FOR THE YEAR 1898.



LOWELL, MASS.:
LOWELL SUN PRINT, SUN BUILDING,
1899.

REPORT.

*To His Honor, the Mayor, and Gentlemen of the
City Council of the City of Lowell:*

In accordance with the requirements of the City ordinances, I hereby most respectfully submit the following r  port of the several departments under my charge for the year ending December 31, 1898:

STREET DEPARTMENT.

RECEIPTS:

Appropriation	\$130,000 00
Additional Appropriation	11,287 47
Receipts from other sources.....	9,194 68

Total receipts..... \$150,482 15

EXPENDITURES:

Superintendent's salary.....	\$ 2,000 00
Labor	99,998 44
Fuel	1,384 50
Hay, Grain, etc.....	5,561 66
Lumber	17,654 72
Hardware, etc	4,338 30
Horses, etc.....	1,594 34
Land damages, etc.....	4,505 70
Sundries	12,645 01

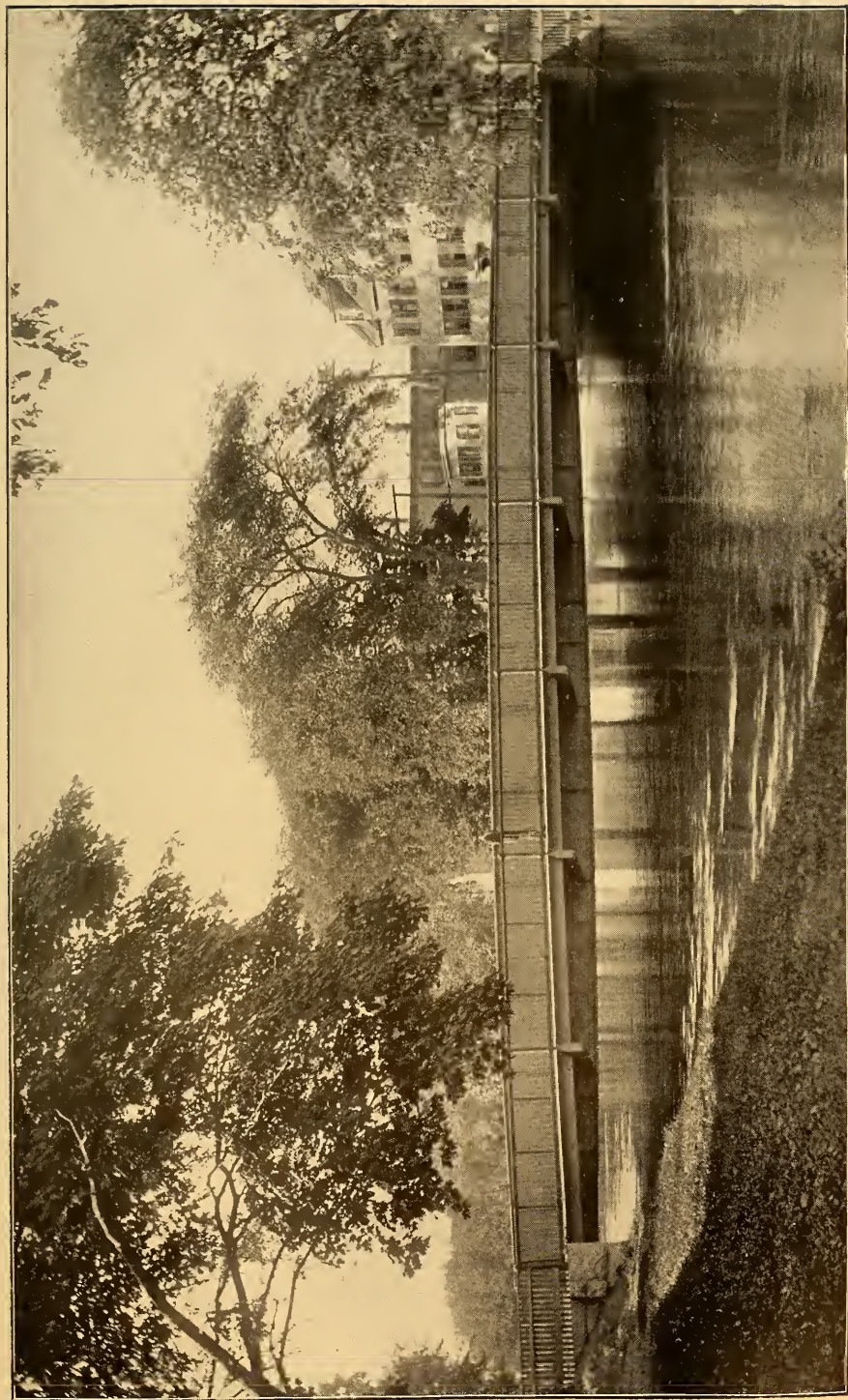
\$149,682 67

Bills of 1897..... 793 07

Total expenditures..... \$150,475 74

Transferred to General Treasury Fund..... 6 41

\$150,482 15



AIKEN STREET CANAL BRIDGE.

PERSONAL PROPERTY.

Schedule of Personal Property belonging to the
Street Department December 31, 1898:

4 anvils.....	\$ 24 00	3 single sleds.....	100 00
2 adzes.....	2 50	19 double sleds....	1,000 00
1 ash sifter.....	75	3 derricks and rigging	500 00
2 blanket chests....	10 00	13 drilling spoons..	3 00
135 blankets.....	270 00	1 dualin heater....	75
300 bundles broom stuff.....	15 00	24 sets double har- nesses.....	1,000 00
2 bridge augurs... .	1 50	4 driving sleighs....	200 00
1 bit stock and bits..	2 50	8 buggies and wagons	600 00
1 pair bolt cutters...	6 00	8 driving harnesses..	140 00
22 horse brushes....	44 00	20 double carts....	2,000 00
56 curry combs.....	14 00	2 double jiggers....	250 00
43 cards.....	4 30	3 forges and tools..	150 00
2 carriage boots....	2 00	1 double stone wagon less front wheels	25 00
3 clocks.....	3 00	1 two-horse lumber wagon	150 00
7 coal hods.... .	3 50	1 single lumber wagon less front wheel...	25 00
1 pair climbing spurs	1 25	11 4-wheel dump carts single.....	1,100 00
7 coal stoves.....	24 00	4 2-wheel dump carts single.	240 00
14 old collars.....	28 00	2 single jiggers.....	300 00
2 hand rollers.....	40 00	1 feather duster....	25
4 sets dump cart har- nesses.....	100 00		
135 lanterns.....	67 50		

PERSONAL PROPERTY—CONTINUED.

6 fire pails.....	1 50	1 hand cart.....	20 00
24 feed baskets... ..	24 00	13 snow plows.....	130 00
48 feed bags.....	48 00	4 tape measures....	6 00
500 ft. fire hose and 5 nozzles.....	250 00	39 sparrow barrels..	39 00
4 feed boxes.....	20 00	6 sparrow carts....	72 00
2 fly nets.....	3 00	2 two-horse street sweepers.....	200 00
1 grindstone	6 00	1 one-horse street sweeper.... ..	75 00
300 grade stakes....	1 50	4 horse brooms for sweeper.... ..	100 00
2 tons hay.....	25 00	1 road gutter machine	150 00
39 draught horses..	5,850 00	1 engine, boiler, stone crusher & buildi'g	6,500 00
5 driving horses....	625 00	370 ft. edgestone....	111 00
400 bushels oats....	160 00	100 ft. corner stone..	62 00
2 tons straw.....	25 00	4000 ft. spruce plank	64 00
8 stone drags.....	40 00	22 ft. white wood..	50
29 street signs	29 00	88 ft. $\frac{3}{4}$ -in. rubber hose.....	8 60
5 wheelbarrow trays.	2 50	250 ft. $\frac{3}{4}$ -in rope....	5 00
4 horse covers.....	10 00	4 barrels paint.....	600 00
68 halters.....	68 00	1 sprinkler cart.....	225 00
2 hay cutters.....	15 00	10 gallons harness oil	5 00
316 snow shovels..	300 00	2 steam road rollers and tools.....	7,500 00
$\frac{1}{2}$ box daulin.....	11 50	1 two-horse dirt scraper.....	75 00
14 stone forks... ..	7 00		
6 sighting sticks....	3 00		
2 iron squares.....	1 50		
5 hay forks.....	2 50		

PERSONAL PROPERTY—CONTINUED.

500 ft. fence boards.	6 00	3 cart bodies.....	150 00
2400 ft. oak plank..	60 00	34 hand drills.....	6 80
101 pick handles....	10 10	1 claw hammer.....	50
28 stone chains.....	28 00	41 bull points.....	24 60
14 striking hammers	28 00	5 hand saws.....	2 50
1 blacksmith shop and tools.....	200 00	64 push brooms, new	48 00
1 steam drill.....	345 00	30 water pails.....	12 00
1000 caps.....	30 00	2 3-gal. oil cans....	1 00
5 iron pails.....	2 50	14 2-gal. oil cans....	7 00
38 sq. pointed shovels	19 00	4 1-gal. oil cans....	50
168 ft. drill steel....	84 00	1 5-gal. oil can.....	75
12 iron rakes.....	4 80	2 derrick chains....	2 00
15 paving mauls....	30 00	1 set light double harnesses.....	65 00
28 stone hammers...	56 00	1 pr. long rubber boots.....	3 25
4 frost hammers....	8 00	40 hoes.....	20 00
5 stone wedges.....	10 00	10 frost wedges.....	20 00
30 tin dippers.....	3 00	30 wheelbarrows....	30 00
40 crowbars.....	80 00	8 long handle shovels	6 00
9 kegs wire spikes..	14 85	2 batteries and wire	40 00
6 trowels....	3 00	5 spirit levels.....	2 50
120 picks.....	120 00	2 cross cut saws....	2 00
14 axes.....	7 00	12 cold chisels.....	1 50
8 kegs wire nails....	13 80	8 S wrenches.....	3 20
2 kegs cut nails....	3 30	8 tamping bars.....	8 00

PERSONAL PROPERTY—CONTINUED.

13 whiffle trees.....	6 00	1400 lbs. salt.....	3 50
18 spreaders.....	9 00	1200 lbs. horse food.	25 00
31 grub axes.....	16 50	4 hand hammers....	3 00
2 stone chisels.....	75	3 sand screens.....	15 00
152 rattan brooms..	38 00	7 paving hammers..	3 50
1 row boat.....	3 00	24 spruce posts.....	3 00
25 lbs. cotton waste.	75	260 tons Salem trap rock.....	328 00
38 sparrow pans....	76 00	8400 paving blocks..	126 00
49 bound stones....	49 00	1 small scales.....	10 00
4 axe handles.....	1 00	Value of harness shop, stock and tools....	75 00
5 galls. linseed oil..	2 50	Value of blacksmith shop, stock and tools....	330 00
15 sign posts.....	15 00	3 ladders.....	20 00
3000 feet assorted lumber.....	45 00		
1 heavy breast plate	5 00		
35 mane brushes....	17 50		
400 lbs. shorts....	3 00		
			<hr/>
			\$29,995 55



ROADWAY OF AIKEN STREET CANAL BRIDGE.

STREETS MACADAMIZED.

Aiken ave.....	225 feet	Rogers st.....	2582 feet
Belmont ave.....	813 "	Twelfth st.....	1125 "
Broadway	5375 "	West Eleventh st.....	285 "
Edson st.....	386 "	Westford st	6628 "
Lilley ave.....	1350 "	Wilder st	786 "
Moody st	1045 "	Willard st.....	225 "
Nineteenth st	798 "	Windsor st	383 "
Princeton st.....	1491 "		

STREETS GRADED.

A st.	750 feet	Frye st.	355 feet
Adams st.	300 "	Garnet st.	225 "
Aiken ave.	1125 "	Gibson st.	1083 "
Albion st.	535 "	Glenwood st.	175 "
Andover st.	545 "	Hale st.	1480 "
Austin st.	523 "	Harvard st.	1128 "
B st.	150 "	Hastings st.	894 "
Baldwin st.	2060 "	Hildreth st.	2550 "
Barclay st.	567 "	Hutchinson st.	288 "
Beacon st.	1950 "	Lawrence st.	456 "
Beech st.	300 "	Liberty st.	4186 "
Billerica st.	150 "	Lyon st.	590 "
Bridge st.	6000 "	Main st.	600 "
Brooks st.	138 "	Mammoth road.	4500 "
Butman road.	1150 "	Manchester st.	1050 "
Chelmsford st.	8575 "	Maple st.	985 "
Common st.	435 "	Mead st.	360 "
Cumberland road.	510 "	Middlesex st.	668 "
D st.	1500 "	Nesmith st.	750 "
East Merrimack st.	842 "	Old Meadow road.	1103 "
Eleventh st.	1311 "	Old Meadow road.	600 "
Elmwood ave.	175 "	Parker st.	1816 "
Fairview st.	300 "	Phillips st.	200 "
Ford st.	875 "	Queen st.	250 "

STREETS GRADED—CONTINUED.

Robinson st..... .. 330 feet	Varnum ave .....1275 feet
Rock st... .. 825 "	Walker st 932 "
Riverside st.....2608 "	Walnut st 775 "
Schaffer st..... 545 "	Washington st..... 363 "
School st'..... 812 "	Waverly ave..... 525 "
School st 470 "	Wentworth ave..... 200 "
Shaw st..... 80 "	West Fifth st. 485 "
South st.....1197 "	Westford st.....2030 "
South Canton st..... 387 "	White st..... 557 "
Stevens st.... ..1091 "	White st..... 343 "
Stevens st 337 "	Wilder st.....3805 "
Suffolk st..... 300' "	Wilson st..... 375 "
Summer st.....1181 "	Winthrop ave 375 "
Swamp st.....1125 "	Wood st.....2175 "
Tilden st..... 225 "	

STREETS LAID OUT AND ACCEPTED IN 1898.

STREETS	BETWEEN WHAT STREETS	WIDTH IN FEET.	LENGTH IN FEET.
Aiken.	Ford and Merrimack.....	50	547 00
Beech.	Extended to Tenth st....	50	382.30
Brookside.	From Varnum ave. northerly	40	268 00
Clare.	Extended to Oliver st....	34	51.77
Cornell.	Middlesex and Princeton st.	40	695.00
Dunbar ave....	Varnum ave. and Pawtucket Boulevard.....	50	1346.40
Lundberg.....	O'Connell and Meadowcroft st.....	40	781.04
Magnolia.	Varnum ave. and Pawtucket Boulevard.....	40	1056 00
Oliver.....	Wannalancit and Clare st.	30	108.66
Percy.....	Stewart and Baldwin st...	40	162.76
St. James.....	From Crowley st. westerly	40	300.67
Stewart.....	Princeton and Percy st...	40	289.20
Winter.....	Extended to South st....	30	230.07
			6218.87

Number of miles of accepted streets, Jan. 1, 1898, 121.15

Number of miles of streets accepted in 1898.... 1.18

Number of miles of accepted streets, Jan. 1, 1899, 122.33

STREETS WIDENED, STRAIGHTENED, ETC., in 1898.

STREETS		WIDTH IN FEET.	LENGTH IN FEET.
Hildreth.....	Widened and straightened from Aiken ave. to Town line.....	40 & 45	1122.3
Meadowcroft.....	Grade changed and re-es- tablished at Lundberg st.		213.0
Old Meadow road.	Widened and straightened from Mammoth road to Town line.....	50 44 to 45	1330.0 444.8
			3110.1

SIDEWALKS LAID IN 1898.

STREETS.	BETWEEN WHAT STREETS.	LIN. FT. CORNER STONE.	LIN. FT. EDGE- STONE.	SQ. YDS. CON- CRETE.
A.....	South side, Puffer and Wilder	7.5	531.4	
Aiken	Both sides, Cheever and Ford	37.5	57.5	61.5
*Beech	Both sides, from end of sidewalk formerly laid to Tenth st.	30.5	710.0	
Bellevue	West side, from end of edgestones formerly laid 250 feet southerly		249.4	
Belmont ave	West side, Talbot and Fairview	10.0	90.0	
C.....	South side, Powell and Puffer	17.9	974.9	
Chelmsford	North side, Thorndike and Westford			114.6
D	Both sides, Powell and Warwick	77.6	2,045.6	1,387.5
*Dartmouth	West side, front premises Clara S. Green		59.8	
Davenport st., West.	North side, from Pine st. easterly ..	9.4	99.4	64.2

* Unfinished, concrete to be laid.

SIDEWALKS--CONTINUED.

SUPERINTENDENT OF STREETS

19

STREETS.	BETWEEN WHAT STREETS	LIN. FT. CORNER STONE.	LIN. FT. EDGE- STONE.	SQ. YDS. CON- CRETE.
Fairview	North side, from Belmont ave., westerly	8.0	186.4	136.7
Fourth ave.....	South side, from Mt. Grove and Mammoth road.....	18.9	452.8	
*Gates	West side, from Sheldon st. southerly 101.7 ft.....	9.1	101.0	
Gibson	Both sides, Westford and Pine where not already laid...		787.9	61.2
Gorham.	West side, railroad crossing and entrance to Edson ceme- tery	65.0	2431.0	
Hall.....	North side, east line Aiken st, east and west line Aiken st., West		75.6	
Harding	Both sides, South Walker and Warwick	9.9	499.9	308.0
Lincoln square.....	.....	33.2	70.9	
Mammoth road.....	West side, Woodward ave. and Eighth ave.	28.5	1262.2	
Mead	Both sides	25.5	712.4	

*Unfinished, concrete to be laid.

SIDEWALKS—CONTINUED.

STREETS.	BETWEEN WHAT STREETS.	LIN. FT.		SQ. YDS	
		CORNER STONE.	EDGE-STONE.	CON- CRETE.	
Nesmith	West side, Sherman southerly to edgestones formerly laid	8.5	690.9		
Pine	East side Davenport st., West, and Westford st.....	10.0	314.4		69.1
Pine.....	South side, from Highland ave. easterly 124 ft.....				78.2
Pleasant	West side, front premises Mrs. Rose Smith.....				31 1
Riverside	East side, Colonial ave. and Mt. Hope st.....		163.6		
School	Both sides, Shaw and C.....	32.9	999.5		
Sherman.....	East side, front premises William C. Purcell.....		57.5		35.7
State.....	Both sides, from Moore st. southerly.....	15 5	961.7		
Stevens.....	East side, Parker and Pine.....	33.2	1707 9		
Tilden	East side, from Moody st. northerly 220 ft	18.3	220.7		
Twelfth	South side, front premises Mrs. Rollin W. Stickney.....		59 1		

SIDEWALKS—CONTINUED.

STREETS.	BETWEEN WHAT STREETS.	LIN. FT. CORNER STONE.	LIN. FT. EDGE- STONE.	SQ. YDS. CON- CRETE.
Warwick	West side, from a point 110 ft. northerly of D st. 100 ft. northerly			61 2
†Westford	Both sides, Chelmsford and Gibson			150 3
White	Both sides, Riverside and Mt. Hope	74 0	1997 4	
Whitney ave	South side, front premises George H. Stevens			30 7
Wilder	East side, from a point 108 ft. southerly from Broadway southerly 416 feet	18 3	326 4	212 4
Wilder	West side, at railroad bridge		41 8	
†Wilder	West side from a point 409 ft. south of Pawtucket st. 90 feet southerly		88 5	
		599 2	19027 5	2802 4

† Unfinished.

SIDEWALK RESOLUTIONS PASSED BUT SIDEWALKS NOT COMPLETED.

STREETS.	LOCATION.	Lin. Ft. of Edgestone to be laid.
Beech	Both sides, edgestones and concrete from end of sidewalk formerly laid to Tenth st. (Edgestones laid only.)	
Burgess	North side, edgestones and cinders from School st. to Hastings st.....	372.9
Canton	East side, edgestones and cinders from Princeton st. northerly to sidewalk already laid.....	681.9
Chelmsford and	North side, concrete from Thorndike st. to Westford st. (Finished.)	
Westford ...	Both sides, concrete from Chelmsford st. to Gibson st., where concrete sidewalks are not already laid. (Unfinished.)	
Dartmouth	West side, edgestones and concrete in front premises Clara S. Green. (Edgestones laid only.)	
Fourth ave ...	Southeast side, edgestones and cinders from Mt. Grove st. to Mt. Hope st.....	700 0
Fourth ave....	Northwest side, edgestones and cinders from Mammoth road to Mt. Grove st.....	460.0
Gates	West side, edgestones and concrete from Sheldon st. southerly 101.7 feet. (Edgestones laid only.)	
Hastings	East side, edgestones and cinders from Burgess st. northerly 100 feet.....	100 0
Livingston	North side, edgestones and concrete from Gorham st. easterly 121 feet.....	121.0

SIDEWALK RESOLUTIONS PASSED BUT SIDEWALKS
NOT COMPLETED—CONTINUED.

STREETS.	LOCATION.	Lin. Ft. of Edgestone To be laid.
Marshall	North side, edgestones and concrete from a point 70 feet west of westerly line of Grand st., 140 feet westerly. (Edgestones laid, concrete not finished).	3271.1
Moody	Both sides, edgestones and cinders from Fourth ave., to the city line,	684.00
Pawtucket.....	Both sides, edgestones and concrete from bridge over Northern canal to Perkins st.....	386.00
Robbins	West side, concrete from a point 224 feet north of northerly line of Pine st., southerly about 15 feet.	579.34
St. James.....	Both sides, edgestones and cinders from Crowley st. westerly 300.67 feet..	383 00
Suffolk.....	Southeast side, edgestones and concrete from Moody st. to bridge over Northern canal.....	
Ward	Both sides, edgestones and concrete from Tucker st. to Perkins st. (Edgestones laid, concrete not finished).	
Wilder	West side, edge and concrete from point 409 feet south of southerly line Pawtucket st., 90 feet southerly. (Edgestones laid only).	
Winthrop ave..	North side, edgestones and cinders from Powell st. westerly.....	

CONCRETE SIDEWALKS REPAIRED.

STREETS.	LOCATION.	SQ. YDS.
Albion	East side.....	31.1
Albion	West side.....	5.4
Austin	Both sides, between Moody and Ford sts.	122.0
Branch.....	North side.....	2 0
Chapel.....	West side, from No. 119 to No. 139..	18.8
Dover	North side, from Grove st. southerly..	7.4
Ford.....	South side, from Austin st. westerly..	77.3
Gibson.....	East side.....	107.3
Grove	South side, between Wilder and Dover sts.....	28.8
Lawrence	West side, at bridge over Hale's brook	58.9
Lilley ave.....	North side.....	147.2
Lilley ave.....	South side	172.8
Middlesex	North side, from Marginal st. easterly	100.7
Mt. Washington	East side, between Varney and Bowers st.....	86 0
Newhall	North side, between Crosby and Cham- bers sts.....	55.7
Nicolette	North side.....	3 7
Princeton	North side, between Windsor and Wilder sts	35.7
Princeton	South side, between Windsor and Wilder sts	19.5

CONCRETE SIDEWALKS REPAIRED—CONTINUED.

STREETS.	LOCATION.	SQ. YDS.
Robbins	East side	9.4
Rock	North side, from Fletcher st. westerly . . .	4.7
Rock	South side, from Fletcher st., westerly . .	75 3
Smith	East side, between Westford and Liberty sts	13.1
Smith	West side, between Westford and Branch sts	5.0
West Fifth	South side	55.6
West Fifth	North side	88.1
Westford	North side, at Howard st	8.7
Wilder	East side, at Railroad bridge	19.6
Wilder	West side, at Railroad bridge	42.8
Wilder	East side, at No. 232	17.6
Wilder	West side, at Princeton st	10.2
		<hr/>
		1430.4

CONCRETE SIDEWALKS TOP DRESSED.

STREETS.	LOCATION.	SQ. YDS.
Albion	East side.....	53.6
Albion	West side.....	152.0
Austin	Both sides, between Moody and Ford sts.	213.5
Central	East side, at No. 760.....	72.7
Chapel.....	West side, at No. 116.....	46.6
Chelmsford ...	West side, from Westford st. southerly..	34.3
Cushing	North side	17.9
Dover	North side, from Grove st. southerly....	32.5
Fayette	East side, from East Merrimack st. southerly	67.7
Ford	South side, near Aiken st. extension....	5.5
Gibson.....	East side.....	55.0
Grove	South side, between Wilder and Dover sts	51.9
Hanover	East side, between Market and Merri- mack sts	8.4
Hildreth	West side, from Lilley ave. southerly....	129.5
Lilley ave	North side.....	411.2
Lilley ave	South side	376.0
Lyon	East side, from Kinsman st. northerly	66.9
Marshall	South side	4.9
Merrimack	North side, at No. 521.....	18.9

CONCRETE SIDEWALKS TOP DRESSED—CONTINUED.

STREETS.	LOCATION.	SQ. YDS.
Mt. Washington	East side, between Varney and Bowers sts	120.5
Rock	North side, from Fletcher st. westerly..	146.4
Rock	South side, from Fletcher st. westerly..	61.5
Smith	East side, between Westford and Lib- erty sts.....	287.8
Smith	West side, between Westford and Branch sts	82.7
Smith.....	East side, between Westford and Branch sts	22.1
Warren	North side	42.5
West Fifth....	South side	165.3
West Fifth....	North side	204.7
Wilder	East side, at No. 232.....	17 6
Wilder	West side, at Princeton st.....	30.6
		<hr/> 3000.7

BRICK SIDEWALKS RELAID.

On both sides of Bridge street, from Merrimack street to Amory street.

CINDER SIDEWALKS.

Adams st.....	228 feet	Eaton st.....	256 feet
Aiken ave.....	600 "	Ellsworth st.....	216 "
Astor st..	80 "	Edson st.....	330 "
B st.....	488 "	Ford st.....	501 "
Barrington st.....	250 "	Forrest st.....	550 "
Bassett st.....	293 "	Fourth ave.....	60 "
Beacon st....	160 "	Fulton st.....	30 "
Bellevue st.....	408 "	Gates st.....	328 "
Blossom st.....	460 "	Gibson st.....	1120 "
Boylston st	498 "	Gorham st.....	2797 "
Boynton st....	570 "	Green st.....	369 "
Branch st.....	33 "	Griffin st.....	471 "
Broadway st.....	210 "	Hale st.....	512 "
Burns st.....	57 "	Hanks st.....	269 "
Burt st	473 "	High st.....	100 "
C st.....	690 "	Hudson st.....	380 "
Chapel st	185 "	Jenness st....	1669 "
Chelmsford st.....	1415 "	Kinsman st.....	75 "
Clare st.....	1142 "	Kinsman st.....	595 "
Crowley st.....	40 "	Lamb st	116 "
Dartmouth st.....	225 "	Lawrence st.....	2002 "
Davis st (Pawtucket- ville).....	426 "	Lawson st.....	74 "

CINDER SIDEWALKS—CONTINUED.

Lewis st.....	59 feet	Pleasant st.....	159 feet
Lincoln st.....	2494 "	Powell st.....	348 "
Lincoln st.....	909 "	Princeton st.....	373 "
Livingston st.....	25 "	Puffer st.....	88 "
Livingston st.....	536 "	Railroad st.....	180 "
Lombard st.....	384 "	Riverside st.....	853 "
London st.....	340 "	Riverside st.....	205 "
London st.....	650 "	Riverside st.....	300 "
Ludlam st.....	430 "	Rogers st.....	1363 "
Madison st.....	246 "	Rolfe st.....	1100 "
Mammoth road.....	130 "	Sargent st.....	766 "
Marsh st.....	372 "	Sayles st.....	370 "
Mead st.....	741 "	School st.....	456 "
Meadowcroft st.....	515 "	School st.....	21 "
Midland st.....	3450 "	Shaw st.....	237 "
Moore st.....	1372 "	Shaw st.....	504 "
Mt. Grove st.....	531 "	Sherman st.....	199 "
Nesmith st.....	205 "	Sixth st.....	102 "
Osgood st.....	50 "	Smith st.....	217 "
Pawtucket st.....	495 "	South Wilder st.....	342 "
Perry st.....	480 "	Starbird st.....	273 "
Pine st.....	1128 "	State st.....	486 "

CINDER SIDEWALKS—CONTINUED.

State st.....	600 feet	West st.....	169 feet
Stevens st.....	1271 "	Westford st	80 "
Stevens st.....	1048 "	Whipple st	506 "
Tanner st.....	217 "	Whipple st	612 "
Tenth st.....	100 "	White st	800 "
Third ave.....	275 "	Whitney ave.....	500 "
Third ave.....	85 "	Winthrop ave.....	375 "
Twelfth st.....	80 "	Wilder st.....	1674 "
Varnum ave.....	366 "	Wilder st.....	208 "
Vernon st	96 "	Wood (Gravel)	1500 "
Walker st.....	1001 "	Woodward ave.....	381 "
Walker st.....	117 "	Wright st.....	120 "
Waterford st.....	58 "		

CRUSHED STONE SIDEWALKS.

Bellevue st	300 feet	Pawtucket st	1894 feet
Chelmsford st	424 "	Robinson st	464 "
Gates st	118 "	Rogers st	417 "
Gorham st	2640 "	Third ave	50 "
Mammoth road	1025 "	Westford st	242 "

COBBLE GUTTERS.

Albion st.....	281 feet	Robinson st....	267 feet
Belmont ave.....	375 "	Rock st.....	1650 "
C st.....	944 "	Riverside st.....	190 "
Congress st.....	520 "	School st.....	292 "
D st.....	2970 "	Smith - st....	160 "
Davenport st.....	220 "	South Canton st.....	774 "
Edson st.....	772 "	Stevens st.....	1275 "
Fairview st.....	192 "	Suffolk st.....	197 "
Georgia ave.....	139 "	Tilden st.....	305 "
Gibson st.....	2166 "	Twelfth st.....	175 "
Liberty st.....	799 "	Tyler st.....	2230 "
Lilley ave.....	2700 "	Walker st.....	411 "
Livingston ave.....	50 "	West Fifth st.....	592 "
Lyon st.....	1180 "	White st.....	2164 "
Moody st.....	1152 "	Wilder st.....	930 "
Powell st.....	333 "	Windsor st.....	766 "
Princeton st....	2622 "		

GRANITE CROSSINGS.

- On Albion street at West Fourth street.
- On Broadway at Adams street.
- On Broadway at School street.
- On Broadway at Suffolk street.
- On Central street at Cady street.
- On Chelmsford street at Short street.
- On Congress street at Robinson street.
- On East Merrimack street at Prescott street.
- On Ennell street at Hildreth street.
- On First street at Simpson street.
- On Ford street at Aiken street bridge.
- On Gorham street at Manchester street.
- On Gorham street at Lundberg street.
- On Gorham street at Weed street.
- On Gorham street at Corbett street.
- On Gorham street at Cosgrove street.
- On Lincoln street at Hale street.
- On Merrimack street at Austin street.
- On Moore street at Sidney street.
- On Riverside street at Moody street.
- On Rock street at Willie street.
- On Sixth street at Fremont street.
- On South Whipple street at Moore street.
- On South Whipple street at Moore street.

GRANITE CROSSINGS—CONTINUED.

On Thorndike street at Railroad Crossing.

On Tilden street.

On Twelfth street at Wachusett street.

On Union street at Linden street.

On Westford street at Dover street.

On Wilder street at Waugh street.

On Willie street at Rock street.

VITRIFIED BRICK CROSSINGS.

On Andover street.	
On Beech street at Sixth street.....	\$30 61
On Pine street at Gibson street.....	17 92
On Princeton street at South Canton street.....	99 05
On Talbot street at Belmont street.....	68 68
On Wentworth avenue.....	46 71
On Westford street at Gibson street.....	70 18

GRANITE CROSSINGS RELAID.

On Aiken street at Hall street.....	\$ 8 75
On Appleton street at Elliott street.....	13 07
On Appleton street at Elliott street.....	18 77
On Bridge street at French street.....	7 50
On Broadway at School street.....	13 63
On Broadway at Mt. Vernon street.....	21 58
On Broadway at Fletcher street.....	12 50
On Broadway at Willie street.....	9 70
On Broadway at Phillips street.....	5 49
On Chelmsford street at Lincoln street....	6 99
On Crosby street at Kinsman street.....	12 24
On D street at South Walker street.....	9 44
On East Merrimack street at Stackpole street....	13 19
On Fletcher street at Broadway.....	13 00
On Gorham street at Cosgrove street.....	5 19
On Gorham street at Corbett street.....	10 82
On Hale street at Lincoln street.....	8 74
On Kinsman street at Crosby street.....	15 01
On Merrimack street at Central street.....	7 38
On Methuen street at Seventh street.....	27 40
On Perkins street at Aiken street.....	31 50
On Read street.....	8 66
On Rock street at Lovejoy's shop.....	19 75
On Third street at Read street.....	17 10

GRANITE CROSSINGS RELAID—CONTINUED.

On Twelfth street.

On Westford street at Windsor street..... \$11 37

On Westford street at Sayles street..... 14 25

On West Sixth street..... 7 21

On Wilder street..... 9 25

CONCRETE CROSSINGS.

STREETS.	LOCATION.	SQ. YDS.
Carleton	At Marshall st.....	34.0
D	At Powell st.....	32.2
D	At School st....	31.3
D	At South Loring st.....	31.1
D	At Spalding st.....	31.1
Gold	At School st.....	32.6
Lagrange	At Fletcher st.....	33.9
Pollard	At Chapel st.....	24.8
Puffer	At D st.....	33.3
Rogers	At Boylston st.....	34.4
School	At D st.....	31.2
South Loring..	At D st....	32.8
South Walker..	At D st.....	32.4
Spalding	At D st.....	31.1
Troy	At Harvard st.....	31.1
Varney	At School st....	30.9
Walker	At Branch st.....	35.2
Walnut	At Central st.....	33 3
		<hr/> 576.7

CONCRETE CROSSINGS REPAIRED.

STREETS.	LOCATION.	SQ. YDS.
Pond	At High st.....	19.6
Princeton	At Windsor st. and Livingstone ave....	119.8
Princeton	At Chester st	33.8
Princeton	At Edson st	140.4
Princeton	At Stevens st.....	124.4
Princeton	At South Canton st.....	21.8
Princeton	At Canton st	40.4
Princeton	At Wilder st.....	63.6
		<u>563.8</u>

PAVING GORHAM STREET.

RECEIPTS:

Appropriation	\$15,500 00
Additional Appropriation	5,800 00
Receipts from other sources	521 36
	<hr/>
	\$21,821 36

EXPENDITURES:

	\$21,572 20
Transferred to General Treasury Fund.....	249 16
	<hr/>
	\$21,821 36

STREET SIGNS PUT UP.

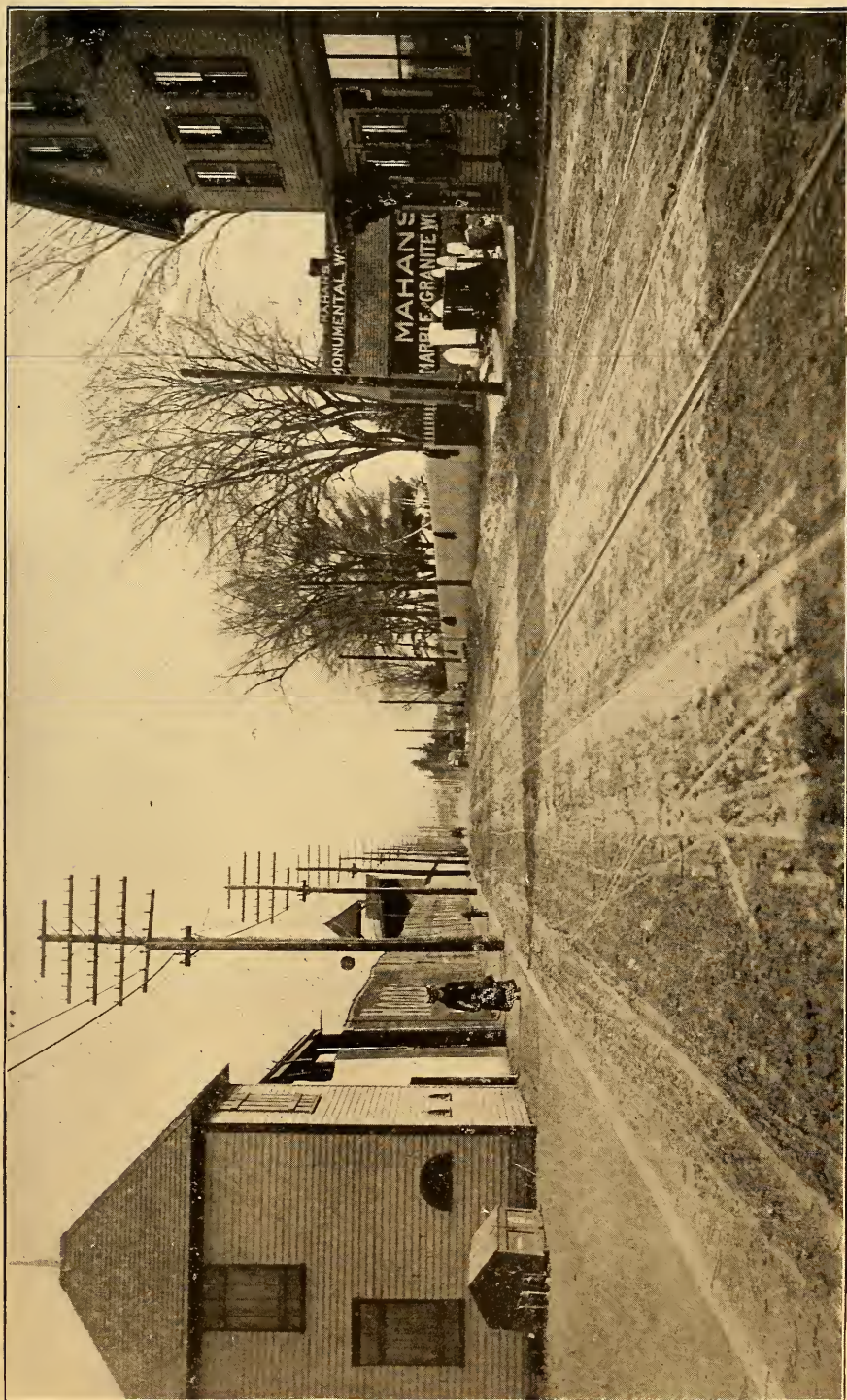
Metal	100
Wooden	120

BUILDING FENCES.

Aiken street	141 feet
Mammoth Road, slats.....	147 "
Old Meadow Road, rail.....	3074 "
Westford street, rail	300 "
White street, slats	150 "
Wilder street, slats	100 "
Wilder street, board	110 "
<hr/>	
4022 feet	

BUILDING STONE WALLS.

Princeton street, at City line	125 feet
Stevens street	250 "
Varnum avenue, at Hospital.....	200 "
	<hr/>
	575 feet



GORHAM STREET, LOOKING SOUTH FROM RAILROAD CROSSING. APRIL 22, 1898.

CONCRETE PAVEMENT.

STREETS.	LOCATION.	SQ. YDS.
Bridge	Both sides (bicycle path) between Merrimack st. and Central bridge (unfinished)	412.9
Chelmsford and Lincoln sq...	East side, from Plain st. to Lincoln st. (bicycle path).....	1032.4

		1445.3

CONCRETE PAVEMENT REPAIRED.

Mammoth road.	.....	86.73
Pawtucket .....	.....	480.65

		567.38

ASPHALT PAVEMENT.

STREETS.	LOCATION.	SQ. YDS.
Aiken.....	From Cheever st. to Aiken street bridge over Merrimack river.....	5248.94
Hall.....	From east line of Aiken st. east, to west line of Aiken st. west.....	469.90

		5718.84

ASPHALTINA PAVEMENT.

Gorham.....	From Lowell and Andover railroad to Cosgrove st.....	7710.32
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GORHAM STREET, LOOKING SOUTH AT FAIR GROUNDS, APRIL 22, 1898.

EXTENSION AIKEN STREET.

RECEIPTS :

Balance undrawn.....	\$10,083 57
Receipts	21 00
	<hr/>
	\$10,104 57

EXPENDITURES :

Labor	\$9,227 19
Sundries.....	745 52
	<hr/>
	\$9,972 71
Transferred to General Treasury Fund.....	131 86
	<hr/>
	\$10,104 57

PAVING WESTFORD STREET.

Appropriation	\$11,000 00
Expenditures	7 00
	<hr/>
Balance undrawn Dec. 31, 1899.....	\$10,993 00



GORHAM STREET, LOOKING NORTH FROM OPPOSITE EDSON CEMETERY GATE, BEFORE PAVING.

PAVING AIKEN STREET.

RECEIPTS :

Appropriation	\$13,000 00
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EXPENDITURES :

Labor.....	\$ 75 75
Material, etc.	2 008 75

2,084 50

Balance undrawn Dec. 31, 1898.....	\$10,915 50
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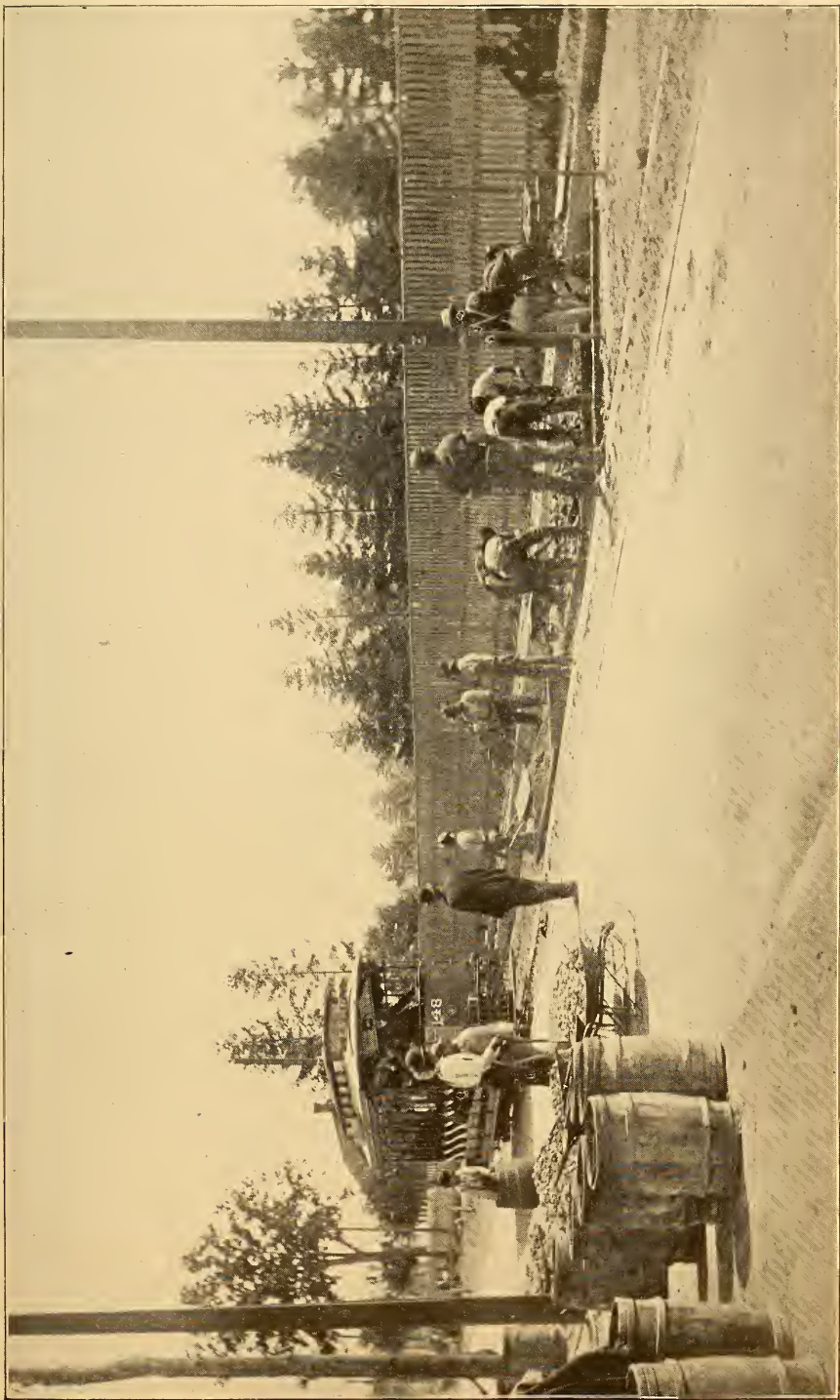
PAVING CHELMSFORD STREET.

RECEIPTS:

Appropriation	\$9,000 00
Overdraft	12 00
	<hr/>
	\$9,012 00

EXPENDITURES:

Labor	\$1,538 17
Material	4,474 90
	<hr/>
	\$6,013 07
Transferred to General Treasury Fund.	2,998 93
	<hr/>
	\$9,012 00



LAYING CEMENT CONCRETE ON GORHAM STREET, OCTOBER 15, 1898.

GRANITE PAVEMENT.

STREETS.	LOCATION.	SQ. YDS.
Aiken st. extension		445.20
Broadway	At city stables.....	436.80
Broadway	At railroad crossing, near Pawtucket canal.....	252 10
Chelmsford and Lincoln sq..	East side, from Plain st. to Lincoln st....	3627.35
Jackson		915.13
Lawrence	At grade crossing.....	308.00
		<hr/>
		5984.58

REPAVING.

STREETS.	LOCATION.	SQ. YDS.
Bridge	From Merrimack st. to near Central bridge	1451.6
Church	From Central st. to George st.	1670.8
East Merrimack	North side, from Canal bridge to angle in street	155 0
Jackson	From Robeson st. to Hamilton st.	100.0
Lawrence	From Swift st. to south side Hale's brook,	630 3
		4007.7



LAYING CEMENT CONCRETE ON GORHAM STREET, JULY 15, 1898.

GRADE CROSSINGS.

FINANCES.

RECEIPTS.

Balance undrawn Jan. 1, 1898.....	\$1,765 64
Excess of expenditures over receipts.....	29 05
	<hr/>
	\$1,794 69

EXPENDITURES :

Labor	\$ 155 06
B. & M. R. R. decree of Court.....	1,309 15
James Boyle, damage to property.....	200 00
Sundries.....	130 48
	<hr/>
	\$1,794 69

BICYCLE PATH.

BRIDGE STREET.

RECEIPTS:

Appropriation	\$925 00
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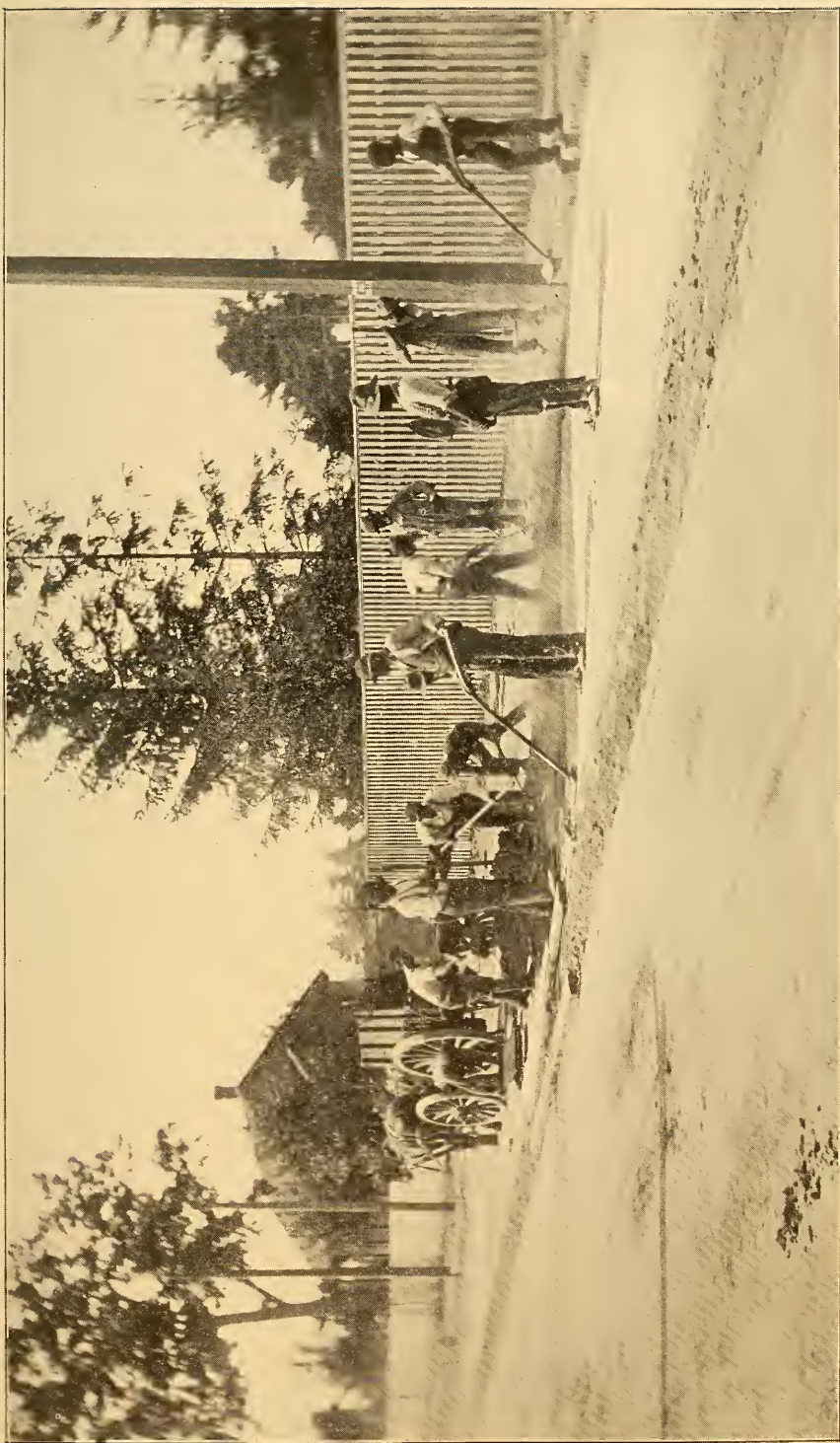
EXPENDITURES:

Labor	\$530 05
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Material	319 00
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	\$849 05
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Balance undrawn Dec. 31, 1898	\$75 95
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LAYING ASPHALTINA ON GORHAM STREET, JULY 23, 1898.



WIDENING ANDOVER STREET.

RECEIPTS :

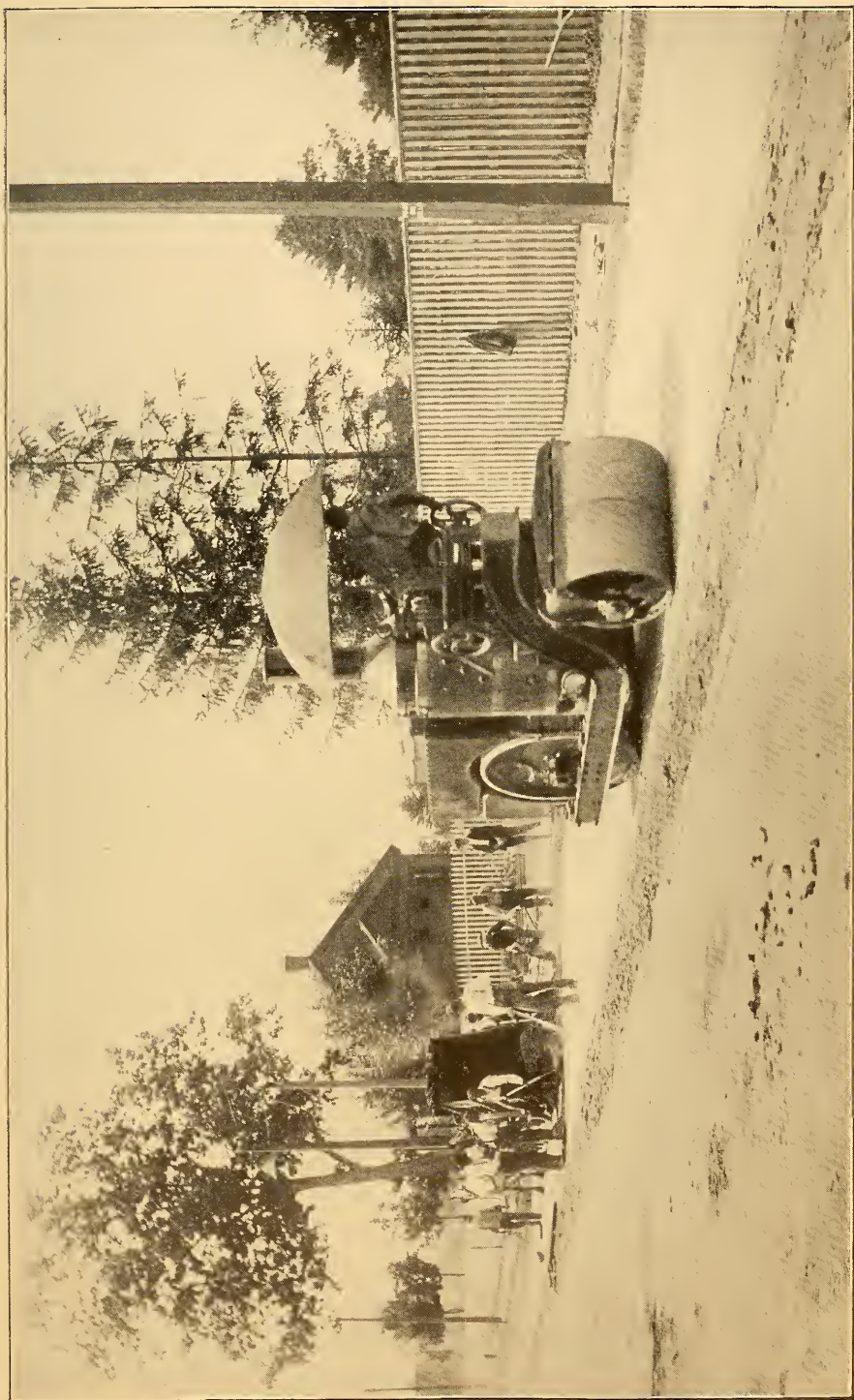
Appropriation	\$35,000 00
Overdraft	10 50
	<hr/>
	\$35,010 50

EXPENDITURES :

Labor	\$ 7,560 37
Sundries	11,754 37
	<hr/>
	\$19,314 74
	<hr/>
Balance undrawn Dec. 31, 1898	\$15,695 76

EXTENSION BEECH STREET.

Appropriation	\$5,968 87
Expenditures, labor.....	1,187 43
	<hr/>
Balance undrawn Dec. 31, 1898	\$4,781.44



ROLLING AND LAYING ASPHALTINA ON GORHAM STREET, JULY 23, 1898.

EXTENSION LUNDBERG STREET.

Appropriation	\$25,000 00
Expenditures	4,124 85
	<hr/>
Balance undrawn Dec. 31, 1898.....	\$20,875 15

REPORT OF THE STREET WATERING DEPARTMENT.

PERSONAL PROPERTY.

30 horses.....	\$4,500 00	43 mane brushes...	25 80
17 sets double harness	765 00	41 horse brushes...	41 00
8 blankets	28 00	50 curry combs. ...	25 00
1 surcingle.....	32	43 cards.....	4 30
36 halters	36 00	1 large stillson wrench	2 00
25 collars.....	50 00	8 pails	2 00
4 interfering boots .	2 00	1 feed truck.....	5 00
15 sprinkler carts... 3,375 00		1 claw hammer....	50
2 monkey wrenches.	1 50	1 cart jack.....	2 00
2 hay forks.....	1 56	4 shut off wrenches	4 00
1 manure fork.....	75	1 pipe	1 00
6 neck yokes.....	6 00	2 hay hooks....	1 00
4 double carts.....	400 00	1 4 qt measure....	50
			<hr/>
			\$8,775 23



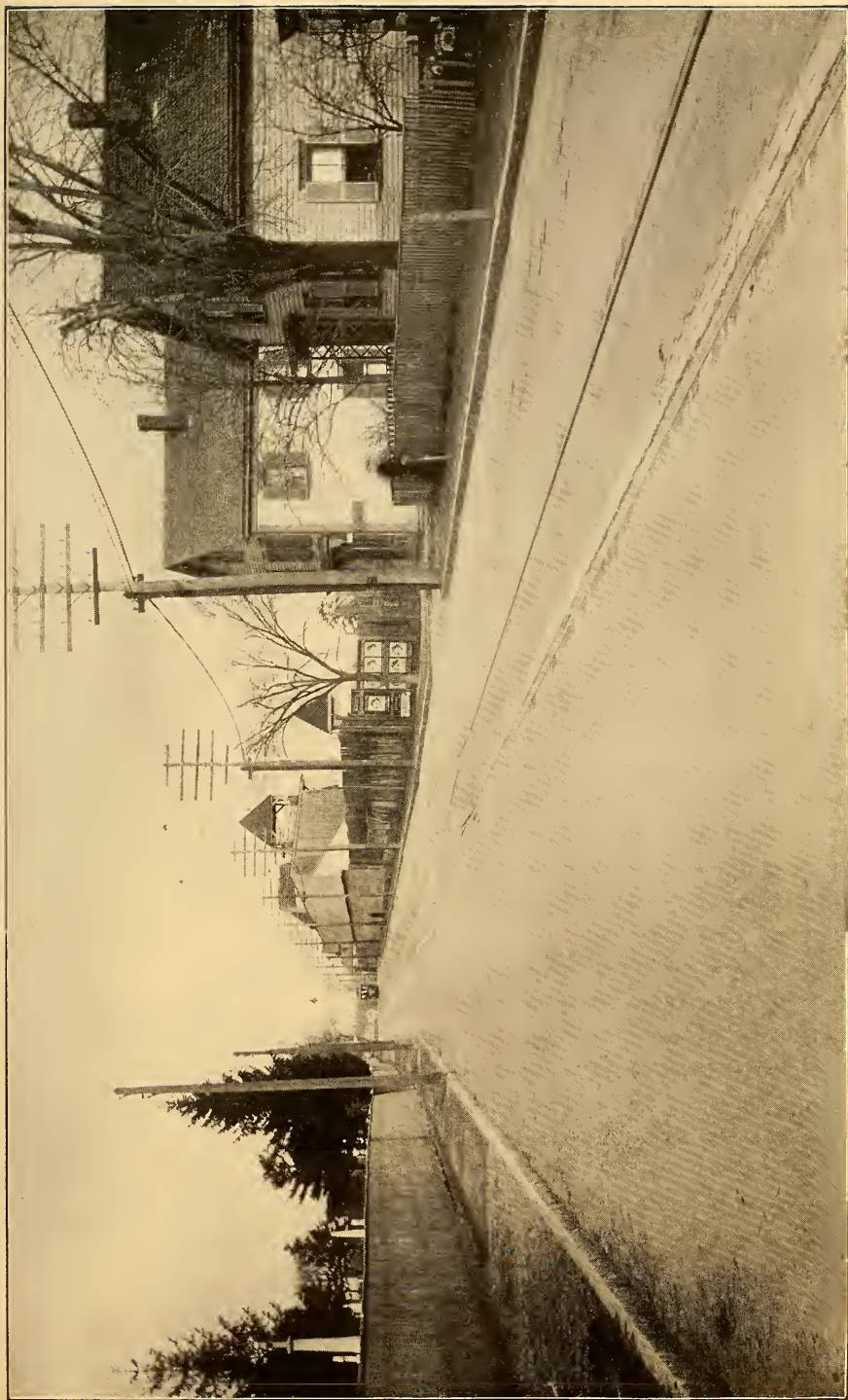
GORHAM STREET ASPHALTINA PAVEMENT, SOUTHWARD FROM RAILROAD CROSSING, NOV. 22, 1898.

PERSONAL BELONGING TO THE BOULEVARD.

1 sprinkler cart	\$325 00	3 wooden rakes....	1 00
33 grass signs.....	7 50	1 storehouse	250 00
10 stone forks.....	2 50	3 wheelbarrows.....	3 75
14 iron rakes.....	4 20	2 brass valves....	10 00
15 hoes	7 50	5 wooden mallets...	2 50
8 lawn mowers.....	56 00	4 hand sprinklers..	4 00
10 scythes }	7 50	1 wooden maul	50
5 snaths }		2 whiffietrees	1 50
16 sickles... ..	48 00	2 tree trimmers	4 00
2 sod cutters.....	1 50	2 tin dippers	30
4 manure forks.....	2 00	1 round pointed	
6 brooms	2 40	shovel	50
1 sand screen	75	1 sq. pointed shovel	60
1 15-ft spirit level...	1 50	1 lantern	60
1 pair edging shears	1 50	3 sighting sticks....	1 50
1 tool box	4 00	1 windmill	3,000 00
1 neck yoke.....	75		
15 lbs. sheet lead..	1 20		
		Total	\$3,756 05

BUILDING WILDER STREET BRIDGE.

Labor	\$204 88
Iron.....	750 00
Lumber	247 37
Cut stone .. .	166 00
	<hr/>
	\$1,368 25



GORHAM STREET ASPHALTINA PAVEMENT, NORTHWARD FROM LUNDBERG STREET, NOV. 22, 1898.

BRIDGES.

STREETS.	LOCATION.	MATERIAL.	MAINTAINED BY
Aiken	Merrimack river	Iron	City.
Bridge	Merrimack river	Iron	City.
Cabot	Northern canal	Wood	City.
School	Merrimack river	Iron	City.
Pawtucket	Northern canal	Wood	Locks and Canals Co.
School	Northern canal	Brick and stone	Locks and Canals Co.
Suffolk	Northern canal	Wood	Locks and Canals Co.
Broadway	Pawtucket canal	Wood	Locks and Canals Co.
Central	Pawtucket canal	Wood	Locks and Canals Co.
Pawtucket	Pawtucket canal	Wood	Locks and Canals Co.
School	Pawtucket canal	Wood	Locks and Canals Co.

BRIDGES—CONTINUED.

STREETS.	LOCATION.	MATERIAL.	MAINTAINED BY
Chelmsford	B. & M. R. R. Co. (Lowell System)	Iron	Boston & Maine Railroad Co.
Hale	B. & M. R. R. Co. (Lowell System)	Iron	Boston & Maine Railroad Co.
Wilder	B. & M. R. R. Co. (Lowell System)	Wood and iron	Boston & Maine Railroad Co. and City.
Church	Concord river	Stone	City.
E. Merrimack..	Concord river	Iron and granite	City. Built in 1894.
Lawrence	Concord river	Wood	City.
Rogers	Concord river	Stone	City.
E. Merrimack..	Eastern canal	Wood	Locks and Canals Co.
Bridge	Eastern canal	Wood	Locks and Canals Co.
Market	Merrimack canal	Wood	City.
Merrimack	Merrimack canal	Stone and brick	Locks and Canals Co. and City.



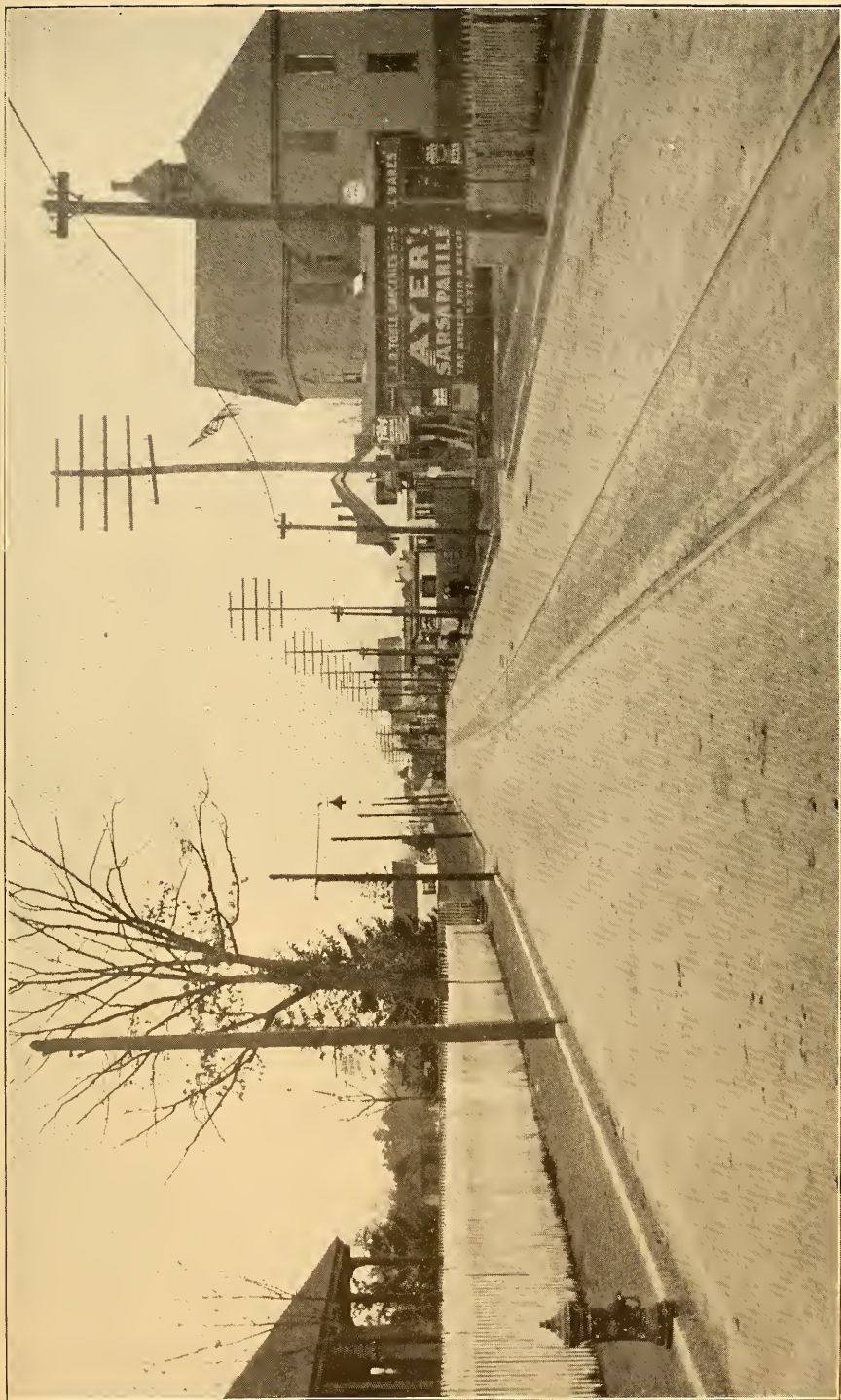
GORHAM STREET ASPHALTINA PAVEMENT, OPPOSITE FAIR GROUNDS, SOUTHWARD, NOV. 22, 1898.

BRIDGES—CONTINUED.

STREETS.	LOCATION.	MATERIAL.	MAINTAINED BY
Thorndike	Pawtucket canal	Wood	Locks and Canals Co.
Cambridge	River Meadow brook	Wood	City.
Congress	River Meadow brook	Wood	City.
Gorham	River Meadow brook	Wood	City.
Howard	River Meadow brook	Stone	City.
Lawrence	River Meadow brook	Wood	City.
Lincoln	River Meadow brook	Wood	City.
Newhall	River Meadow brook	Iron	City.
Plain	River Meadow brook	Wood	City. Built in 1894.
Broadway	Western canal	Stone	City.
Dutton	Western canal	Wood	City.

BRIDGES—CONTINUED.

STREETS.	LOCATION.	MATERIAL.	MAINTAINED BY
Hall (private st)	Western canal	Wood	Lawrence Manufacturing Company and Suffolk Mills.
Jefferson	Western canal	Iron	City.
Market	Western canal	Wood	City.
Merrimack	Western canal	Wood	Locks and Canals Co. and City.
Moody	Western canal ..	Wood	City.
Worthern	Western canal	Wood	City.
Lawrence	Wamesit canal	Wood	Wamesit Power Co.
Moody	Merrimack river	Iron	City. Built in 1896.
Aiken	Northern canal	Iron	City.



GORHAM STREET ASPHALTINA PAVEMENT, NORTHWARD FROM EDSON CEMETERY, NOV. 22, 1898.

SEWER CONSTRUCTION.

RECEIPTS :

Appropriation	\$75,000 00
Additional Appropriation.	30,000 00
	<hr/>
	\$105,000 00

EXPENDITURES :

Labor	\$79,167 38
Sundries	25,821 31
	<hr/>
	\$104,988 69
Transferred to general treasury fund..	11 31
	<hr/>
	\$105,000 00

SEWER MAINTENANCE.

RECEIPTS:

Appropriation	\$14,000 00
Appropriation for 1897 bills.....	1,426 29
Receipts from other sources.....	660 38
	<hr/>
	\$16,086 67

EXPENDITURES:

Labor	\$9,718 33
Lumber, hardware, etc.....	265 29
Pipe, brick, cement, etc.....	43 11
Sundries.....	4,444 73
	<hr/>
	\$14,471 46
1897 bills.....	1,426 29
	<hr/>
	\$15,897 75
Transferred to general treasury fund... ..	188 92
	<hr/>
	\$16,086 67

PERSONAL PROPERTY.

Schedule of Personal Property belonging to the
Sewer Department January 1, 1899:

40 parts of old grates	\$105 00	5 water glasses.....	60
14 basin covers.....	7 00	10,000 bricks... ..	64 40
7 halters	7 00	1 box roller.	2 50
800 feet cotton hose	17 50	1 piper's die stock and plate.....	18 00
17 crow bars.....	17 00	2 tool boxes for boiler	8 00
5 shades.....	5 00	2 pair of pipe tongs.	4 00
7 crabs for shear poles	175 00	4 wheelbarrow wheels	1 00
3 tons soft coal.....	11 52	1 roll tar paper.....	1 00
11 barrels cement...	10 23	9 hydrant wrenches	9 00
500 feet Akron pipe all sizes.....	60 00	12 jack bars.....	2 50
175 pounds scrap iron	2 00	1 paving ram.....	3 00
8 barrels for water..	8 00	3 blacksmith's forges	30 00
3 stoves.....	15 00	18 tool boxes.....	180 00
7 mortar beds.....	7 00	4 sewer wheelbarrows	4 00
2 sand screens.....	2 00	2 Dutchmen for hy- drants.....	50 00
60 catch basin steps	7 00	9 wooden rolls, 4 x 7	2 25
6 Concord grates No.20	42 00	3 wooden rolls, 5x3..	2 25
3 balls packing.....	45	2 small tool houses	40 00
18 sq. feet packing .	3 00	1 blacksmith's house	20 00
1 pound emery.....	40	1 carpenter's house	20 00
1 work bench	5 00	4 engine houses....	80 00

SEWERS—CONTINUED.

6 batteries.....	150 00	16 set shear poles..	160 00
8 set of wires.....	16 00	1 Trainer transmitter sewer machine..	3,000 00
8 steam drills and tools complete..	1,500 00	11 jack screws.....	22 00
8 mason's trowels..	6 00	4 kegs 30 penny nails	6 60
1 bit stock and 2 bits	2 50	8 kegs 10 penny nails	13 20
13 calking tools....	6 50	190 lanterns	95 00
4 plug drill hammers	2 00	21 pair long legged rubber boots....	52 50
1 tape line.....	1 50	30 iron pails	15 00
3 pounds shims and wedges	1 50	25 wheelbarrows ...	20 00
25 stone cutter's chis- els and points..	10 00	550 4-ply $\frac{3}{4}$ in. rub- ber hose.....	55 50
2 sets blacksmith's tools	20 00	1 set branding irons	2 00
4 anvils	21 00	1 sewer trap	5 00
55 striking hammers	110 00	10 hoes	4 00
18 stone hammers..	36 00	12 post hole spoons	12 00
6 sledge hammers..	18 00	237 round pointed shovels	142 20
2 fiddle blocks.....	11 00	175 square pointed shovels	70 00
240 pick handles...	24 00	4,000 feet rope, vari- ous sizes.....	300 00
25 2-sheave blocks..	40 00	70,000 feet sewer lumber	1,050 00
112 catch basin dip- pers	18 00	8 marine pumps....	100 00
6 sheating caps....	12 00	170 feet large hose pumps	340 00
12 100-lbs. iron mauls	12 00		
23 wooden mauls ..	23 00		

SEWERS—CONTINUED.

50 pounds dynamite	21 50	1 gallon black paint	2 00
4 5-gallon wooden oil cans	3 00	$\frac{1}{2}$ gallon asphaltina..	1 00
2 10-gallon wooden oil cans	2 00	6 paint brushes	2 00
2 10-gallon tin oil cans	2 50	8 claw hammers	4 00
2 5-gallon tin oil cans	1 50	11 boxes 4-foot caps	16 50
1 60-gallon tin oil can	7 50	7 boxes 6-foot caps..	11 94
5 steam drill pumps	5 00	16 boxes 10-foot caps	36 96
32 drilling spoons..	16 00	30 padlocks	30 00
10 hand saws	6 00	3 feet steam drill packing	45
1 saw clamp	1 25	1 gong	2 50
4 adzes	5 00	16 boxes 8 foot caps	32 64
6 axes	4 50	1 box repairs for marine pumps..	20 00
7 hatchets	7 00	4 strainers for marine pumps	4 00
3 packages carriage tools	3 00	13 monkey wrenches	9 75
4 spirit levels	2 00	1 Ledgewood engine, No. 11,870	900 00
2 steel squares	2 00	1 Ledgewood engine No. 11,876	900 00
6 measuring sticks..	3 00	1 Ledgewood engine, No. 10,268	900 00
24 plug hammer handles	3 00	1 Hoadley engine, No. 1,368	700 00
75 sledge hammer handles	7 50	1 Webb Watson engine	1,000 00
1 gallon blue paint..	2 00		

SEWERS—CONTINUED.

4 sets engineer's tools	8 00	1 table.....	8 00
6 sets engin'rs boxes	24 00	6 chairs and mat....	36 00
2 upright boilers with fixtures	500 00	1 grub axe... ..	1 00
2 derricks and extra masts complete	500 00	304 picks.....	197 60
2 submerged pumps with two extra fans	460 00	2 boxes steam fittings	15 00
2 pile drivers.....	300 00	21 large chains.....	63 00
1 tool house and fix- tures	3000 00	25 feet small chains	1 25
4 driving horses....	500 00	5 steam drill tool boxes	2 00
4 draught horses....	600 00	10 spanner wrenches	7 50
2 Goddard buggies..	450 00	2 large hose nozzles	25 00
1 Concord wagon..	75 00	10 hydrant wrenches	10 00
1 sleigh.....	55 00	1 bolt cutter.....	8 00
1 2-seat wagon	75 00	1 set tap and dies..	15 00
1 truck, single	50 00	4 sighting sticks....	1 00
1 truck, double	300 00	26 sling chains.....	13 00
4 1-horse dump carts	250 00	7 set tackle and falls	42 00
1 1-horse two-wheel dump cart.....	40 00	40 gallons kerosene	3 20
9 blankets	22 00	3 neck yokes.....	3 00
6 harnesses... ..	200 00	34 wooden pails....	11 00
1 robe	18 00	6 oat meal buckets..	3 00
1 roll-top desk.....	30 00	6 frost wedges.....	6 00
		24 hand drills.....	4 80
		1 sprinkling can....	75
		68 feet plug steel....	10 20

SEWERS—CONTINUED.

1 pipe vise	14 00	4 B. S. grates, small	12 00
1 carpenter's vise..	10 00	6 iron tampers	3 60
1 blacksmith's vise..	8 00	36 scoop handles	7 00
2 water tubs	1 00	538 feet steel	
2 hand drills	16 00	130 red lantern globes	7 80
8 pair short-leg rubber boots	20 00	24 white lantern globes	2 40
2 boats	30 00	8 cross cut saws	8 00
4 sheathing pullers..	18 00		
6 B. S. grates, large	36 00		
			<hr/>
			\$21,170 47

STREET CATCH BASINS BUILT DURING 1898.

STREETS	LOCATION.
Aiken ave	East side, 11.5 feet north of north line Lakeview avenue.
Aiken ave	West side, 3 feet north of north line Lakeview avenue.
Aiken ave	East side, 7 feet north of west line Lilley avenue.
Aiken	East side, 7 feet south of south line Perkins street.
Aiken	West side, 9 feet south of south line Perkins street.
Aiken	East side, 388 feet north of north line Perkins street.
Aiken	East side, 199 feet north of north line Perkins street.
Aiken	East side, 14 feet north of north line Perkins street.
Aiken	West side, 14 feet north of north line Perkins street.
Aiken	West side, 199 feet north of north line Perkins street.
Aiken	West side, 388 feet north of north line Perkins street.
Aiken	East side, 9.5 feet south of north line Cheever street.
Aiken	West side, 9.5 feet south of north line Cheever street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Aiken	East side, 184 feet south of south line Hall street.
Aiken	West side, 197 feet south of south line Hall street.
Andover	South side, 5 feet west of west line Wentworth avenue.
Andover	South side, 11 feet east of east line Park street.
Andover	South side, 11 feet east of east line Nesmith street.
Andover, Cesspool	South side, 537 feet west of west line Pentucket avenue.
Andover, Cesspool	South side, 883 feet east of east line Park street.
Andover, Cesspool	Centre of track, intersection High street.
Andover	North side, 6 feet west of west line Wentworth avenue.
Andover	South side, 754 feet east of east line Park street.
Andover	South side, 673 feet east of east line Park street.
Andover	South side, 478 feet east of east line Park street.
Andover	South side, 193 feet east of east line Park street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Bellevue.	East side, 6 feet south of south line Westford street.
Bellevue.	West side, 14 feet south of south line Westford street.
Bridge.	West side, 8.5 feet south of south line Richardson street.
Bridge.	West side, 4 5 feet north of north line Richardson street.
Bridge.	East side, 19 feet north of south line Richardson street.
Bridge, Cesspool.	Centre track, 14 feet south of south line Amory street.
Bridge, Cesspool.	Centre track, 14 feet south of south line Amory street.
Broadway, Cess..	Centre north track, 151 feet north of north line Adams street.
Broadway, Cess..	Centre south track, 151 feet north of north line Adams street.
C.	South side, 18 feet west of west line Powell street.
C.	South side, 7 feet west of west line Spalding street.
C.	North side, 7 5 feet west of west line School street.
Canton.	West side, 5 feet north of north line Westford street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Canton	East side, 3 feet north of north line Westford street.
Carlisle	East side, 208 feet north of north line Suttle street.
Carlisle	West side, 207 feet north of north line Suttle street.
Carlisle	East side, 51 feet south of north line Suttle street.
Carlisle	West side, 39 feet south of north line Suttle street.
Carlisle	East side, 605 feet north of north line Suttle street.
Carlisle	West side, 613 feet north of north line Suttle street.
Central	North side, 12 feet east of east line Walnut street.
Chelmsford	East side, 8 feet north of north line Short street.
Chelmsf'd, Rebuilt	East side. 10 feet north of north line New Fletcher street.
Chelmsford	East side, 21 feet north of north line Waite street.
Crowley	East side, 51.5 feet south of south line St. James street.
D	South side, 3.7 feet west of west line Spalding street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
D	North side, 4.6 feet west of west line Spalding street.
D	North side, 6 feet west of west line So. Loring street.
Davenport.....	South side, 1.5 feet west of west line Georgia avenue.
Davenport.....	South side, 5 feet east of angle in Davenport street, W.
Durant	North side, 32 feet west of west line Vernon street.
Durant	South side, 109 feet west of west line Vernon street.
East Merrimack..	South side, 1 foot east of east line Howe street.
East Mer'k, Cess	Central North track, opposite Stackpole street.
East Mer'k, Cess	Central South track, opposite Davidson street.
Edson	West side, 22 feet north of north line Westford street.
Ford.....	South side, 11.5 feet east of east line Aiken street.
Foster	West side, 91 feet south of south line Princeton street.
Gates	East side, 2 feet south of south line Westford street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Gorham	West side, 8 feet south of north line Cosgrove street.
Gorham	East side, 6 feet north of north line Cosgrove street.
Gorham	West side, 17.5 feet south of north line Corbett street.
Gorham	East side, 3 feet north of north line Corbett, street.
Gorham	West side, 4 feet north of north line Weed street.
Gorham	East side, 9 feet north of north line Weed street.
Gorham	East side, 8.5 south of south line Lundberg street.
Gorham	West side, 13.5 feet north of north line Lundberg street.
Gorham	West side, 100 feet north of north line Fay street.
Gorham	East side, 339 feet north of north line Fay street.
Gorham	West side, 342 feet north of north line Fay street.
Gorham	West side, 536 feet north of north line Fay street.
Gorham	East side, 541 feet north of north line Fay street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Gorham	West side, 742 feet north of north line Fay street.
Gorham	East side, 743 feet north of north line Fay street.
Gorham	West side, 36 feet north of north line Manchester street
Hale	South side, 8 feet west of west line Lincoln street.
Hale	North side, 3 feet east of west line Lincoln street.
Hall	South side, 5 feet west of west line Aiken street.
Hall	North side, 1 foot west of west line Aiken street.
Hanover	South side, 170 feet east of east line Moody street.
High, Cesspool...	Central track, 31 feet north of north line Sherman street.
Hildreth, Cess...	North side, 95 feet east of east line Essex street.
Hildreth, Cess ..	South side, 95 feet east of east line Essex street.
Hildreth, Cess...	South side, 140 feet east of east line Essex street.
Hildreth, Cess ..	North side, 155 feet east of east line Essex street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Hovey	South side, 55 feet east of east line Wentworth avenue.
Hovey	North side, 5.5 feet east of east line Wentworth avenue.
Jackson	South side, 31 feet west of west line Robeson street.
Lawrence	East side, 146.5 feet south of north line Watson street.
Lawrence	West side, 146.5 feet south of north line Watson street.
Liberty	North side, 4 feet west of east line South Walker street.
Liberty	South side, 9 feet west of west line South Walker street.
Liberty	South side, 4.5 feet west of west line South Loring street.
Livingston Ave..	East side, 569.5 feet north of north line Princeton street.
Livingston Ave..	West side, 569.5 feet north of north line Princeton street.
Mammoth Rd....	East side, 3 feet north of north line Sixth avenue.
Mammoth Rd....	East side, 12 feet south of south line Sixth avenue
Marlborough....	West side, 5.5 feet south of south line Westford street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Moody	East side, 104 feet south of south line Third avenue.
Moody	East side, 8 feet north of north line Riverside street.
Moody	West side, 12 feet north of north line Riverside street.
Moody	East side, 22 feet south of south line Gardner avenue.
Moody	West side, 19 feet south of south line Gardner avenue
Moody	West side, 7.5 feet north of north line Gershom avenue.
Moody	West side, 185 feet north of north line Gershom avenue.
Moody	East side, 4.5 feet north of north line Gershom avenue.
Moody	West side, 2 feet south of south line Third avenue.
Nichols	West side, 6 feet south of south line Westford street.
Otis	North side, 210 feet west of west line Bourne street.
Parkview Ave. . . .	East side, 210 5 feet north of north line Hovey street.
Parkview Ave. . . .	East side, 345.5 feet south of south line Mansur street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Parkview Ave....	East side, 7 feet south of south line Mansur street.
Parkview Ave....	East side, 8 feet south of south line Hovey street.
Parkview Ave....	West side, 7 feet south of south line Hovey street.
Pine	South side, 9 feet west of west line Wilder street.
Pine	North side, 8 feet west of west line Stevens street.
Pine	South side, 11 feet west of west line Stevens street.
Pine	North side, 6 feet east of east line Stevens street.
Pine	South side, 4 feet east of east line Stevens street.
Pine	North side, 3 feet west of west line Robbins street.
Pine	North side, 10 feet east of east line Gibson street.
Princeton	South side, 65 feet east of east line Windsor street.
Princeton	South side, 65 feet east of east line Chester street.
Princeton	North side, 4 feet east of east line Harvard street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Princeton	South side, 5.5 feet east of east line Edson street.
Princeton	South side, 2.5 feet west of west line Stevens street.
Princeton	North side 4.5 feet west of west line Stevens street.
Princeton	North side 61 feet west of west line South Canton street.
Princeton	South side, 3 feet west of west line South Canton street.
Princeton	South side, 5.5 feet east of east line South Canton street.
Princeton	North side, 2 feet west of west line South Canton street.
Princeton	North side, 6.5 feet east of east line South Canton street.
Railroad	North side, 10 feet west of west line angle in street.
Read	West side, 4.5 feet north of north line Second street.
Read	West side, 15 5 feet north of north line Third street.
Riverside	South side, 5 feet west of west line Moody street.
Riverside	North side, 244 feet east of east line Moody street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Riverside	North side, 2 feet west of west line Sarah avenue.
Riverside	North side, 244 feet east of east line Sarah avenue.
Riverside	North side, 593.5 feet east of east line Sarah avenue.
Rogers	West side, 15 feet north of north line Knapp avenue.
Rogers	West side, 10 feet south of south line Knapp avenue.
Rogers	South side, 7 feet west of west line Hanks street.
Rogers	South side, 165 feet west of west line Boylston street.
Rogers	North side, 175 feet west of west line Boylston street.
Rogers	East side, 377 feet south of south line Knapp avenue.
Rogers	West side, 377 feet south of south line Knapp avenue.
Rogers, Cesspool.	Centre track, 15 feet west of west line Boylston street.
School	East side, 4.5 feet north of north line E street.
School	West side, 5.6 feet north of north line E street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Seventh Ave.....	North side, 8 feet east of east line Mammoth road.
Seventh Ave.....	South side, 5 feet east of east line Mammoth road.
Shaffer.....	East side, 7 feet north of north line Broadway.
Shaffer.....	West side, 11 feet north of north line Broadway.
Spencer	North side, 6 feet west of west line Gorham street.
Spencer	South side, 6 feet west of west line Gorham street.
Stevens.....	West side, 272.5 feet south of south line Pine street.
Stevens.....	East side, 274.5 feet south of south line Pine street.
Stevens.....	East side, 3 feet south of south line Pine street.
Stevens.....	West side, 10 feet south of south line Pine street.
Stevens	West side, 303 feet north of north line Pine street.
Stevens.	West side, 714 feet south of south line Pine street
Stevens.....	East side, 741 feet south of south line Pine street.

STREET CATCH BASINS—CONTINUED.

STREETS.	LOCATION.
Tenth	South side, 10 feet east of east line Bridge street.
Tenth	North side, 7 feet east of east line Beech street.
Tenth	South side, 35 feet east of east line Beech street.
Tilden	East side, 213 feet north of north line Moody street.
Walker	East side, 104 feet north of north line West Adams street.
Walker	East side, 11 feet south of south line Columbus avenue.
Walker	West side, 12 feet south of south line Columbus avenue.
Ward	East side, 280.5 feet north of north line Tucker street.
Ward	West side, 276.5 feet north of north line Tucker street.
Wentworth Ave..	East side, 15 feet south of south line Andover street.
Wentworth Ave..	East side, 513 feet south of south line Hovey street.
Wentworth Ave..	East side, 7.5 feet north of north line Hovey street.
Wentworth Ave..	East side, 520.5 feet north of north line Hovey street.

STREET CATCH BASINS--CONTINUED.

STREETS.	LOCATION.
Wentworth Ave..	East side, 10 feet south of south line Mansur street.
Wentworth Ave..	East side, 1.5 feet south of south line Glenwood street.
Wentworth Ave..	East side, 196 feet north of north line Glenwood street.
Westford	North side, 11 feet west of west line Windsor street.
Westford	South side, 8 feet east of east line Nichols street.
Westford	South side, 2 feet west of west line Gates street.
Westford	South side, 8 feet west of west line Burr street.
Westford	South side, 14 feet east of east line Gibson street.
Wilder.....	West side, 3.5 feet north of north line Westford street.
Wilder	East side, 8 feet north of north line Westford street.
Wilder	West side, 253 feet south of south line Pine street.
Wilder	West side, 642 feet south of south line Pine street.
Wilder	East side, 9 feet south of south line Grove street.

STREET CATCH BASINS--CONTINUED.

STREETS.	LOCATION.
Wilder	West side, 27.6 feet north of north line Shaw street extension.
Wilder	West side, 24 feet south of south line Shaw street extension.
Wilder	East side, 106 feet south of south line Waugh street.
Wilder	West side, 103 feet south of south line Waugh street.
Willard	East side, 2 feet south of south line Nineteenth street.

TABLE SHOWING THE SEWERS BUILT DURING THE YEAR 1898, LENGTH, SIZE, MATERIAL, WHEN BEGAN, FINISHED AND COST.

STREETS	SIZE AND LENGTH					MATERIAL	Cubic Yards Ledge	Average Depth	Manholes	BEGUN	FINISHED	COST	Total Length
	24 inch	18 inch	15 inch	12 inch	10 inch								
Anderson, unfinished				23		Portland Pipe.	.....	13	1	June 20.	Unfinished.	86 47	23
Aiken.				377		Portland Pipe.	.....	12.5	2	Oct. 14.	Oct. 14.	682 10	377
Corbett, unfinished				34		Portland Pipe.	.....	9.		June 20.	Unfinished.	51 48	34
Fifth Ave. and Avon, 419 ft. 45 in. x 30 in. brick						Brick and Pipe.	517	12.3	5	May 2.	June 6.	11745 28	1352
Gorham and Carlisle				686		Portland Pipe.	.....	11.3	6	June 30.	Aug. 16.	3358 39	1268
Hanks and Belrose, 125 ft. 22 in. x 33 in. brick						Brick and Pipe.	.....	11.4	4	Apr. 21.	June 1.	3303 69	765
Methuen				276		Portland Pipe.	.....	11.6	1	Apr. 22.	May 10.	768 66	276
Meytle St. extension, 30 in. iron						Iron Pipe.	.....	.....		.....	Unfinished.	704 54	
Oaklands Main, completed, 130 ft. 45 in. x 30 in. brick						Brick	.....	.....		Mar. 28.	May 10.	2496 17	190
Pine, unfinished				7		Portland Pipe.	399	13.5	2	July 14.	Unfinished.	8122 30	1679
Powell and Windsor				274		Portland Pipe.	80	9.5	3	May 12.	May 26.	998 38	672
Princeton at Windsor					141	Portland Pipe.	.....	7.2	1	May 12.	May 19.	340 11	141
Plain at Brewery				641		Portland Pipe.	.....	9.	1	Sept. 12.	Sept. 26.	816 62	641
Princeton at Sayles				541		Portland Pipe.	104	9.8	2	May 31.	June 21.	1515 47	541
Parkview Ave., 251 ft. 37 in. x 25 in.				998		Brick and Pipe.	.....	12.2	1	June 27.	Sept. 30.	7122 62	2028
Richardson				598		Portland Pipe.	35	11.8	3	May 11.	June 16.	2175 17	598
Read St. extension, 24 in. iron						Iron Pipe.	.....	.....		.....	Unfinished.	340 10	
Shaw St. extension, 1216 ft. 45 in. x 30 in. brick						Brick	2702	14.6	1	June 21.	Nov. 16.	19647 86	1216
South Common, repairs				625		Portland Pipe.	.....	9.7	1	June 7.	June 18.	2790 08	625
Tanner and Howard, unfinished				490		Portland Pipe.	170	16.	1	Sept. 12.	Unfinished.	11801 87	1110
Uplam				310		Portland Pipe.	.....	11.2	2	May 20.	June 9.	917 55	310
Varney					232	Portland Pipe.	12	8.2	2	May 2.	May 12.	426 08	232
Wentworth Ave., 323 ft. 45 in. x 30 in. brick.				970	263	Brick and Pipe.	.....	13.9	2	May 10.	June 23.	9833 69	1827
Totals	2787	4717	2342	3162	373		4019		72			\$90214 08	15905

* Oaklands Main (completed) total length 1861 feet; total cost \$35,908 20.

SEWERS BUILT DURING THE YEAR 1898—CONTINUED.

Lineal feet of sewers laid in 1898	15,905 or	3.01 miles.
Laid previously	76.29	"
	<hr/>	
	79.30	"
Deduct lineal feet of sewers rebuilt.....	0.05	"
	<hr/>	
Length of sewers January 1, 1899	79.25	"

REMARKS.

STREETS.

January 1, 1899, there were 122.33 miles of accepted streets in this city, under the care of the Street Department. The past year has been one of the busiest in the history of the department. A great many streets have been put in such condition that it will cost very little for years to maintain them. Streets which have been paved with smooth pavement or macadamized with Salem trap rock I consider permanent improvements.

There have been 13,428 square yards of smooth pavement laid the past year, 4.45 miles of streets macadamized and 4.96 miles of streets graded. With the addition of the new steam roller our equipment for making good roads is better than ever before.

BRIDGES.

There are several bridges which need more or less repairing and paint. The Aiken Street bridge

over the Merrimack River is badly in need of paint, and other bridges need replanking and minor repairs on the iron work. The Aiken Street bridge over the Northern Canal, contracted for in 1897, was completed in due season, and with the approaches brought to grade and paved proves to be a handsome and substantial structure. (See photographs.)

The Wilder Street bridge has been built to line and grade, which greatly improves that thoroughfare, and at a small cost. (See table.)

Contracts have been let for the Lundberg Street bridge, Cyrus Barton being the lowest bidder for the abutments and the Canton Bridge Company of Canton, Ohio, for the iron work. This bridge will be a great convenience to the people in that district.

Repairs on bridges have been made as follows:

Central bridge, replanked.

Aiken Street bridge, street car tracks removed.

Cabot Street bridge, street car tracks removed.

Pawtucket bridge, replanked.

Merrimack Street bridge, over Northern Canal, abutment repaired at a cost of over \$400.

Market Street bridge, over Northern Canal, replanked.

Lawrence Street bridge, patched.

Market Street bridge, over Merrimack Canal, patched.

STREET SIGNS.

During the past year one hundred metallic signs and one hundred and twenty wooden signs have been put up in various parts of the city. While our city is numbered in very fine shape, our street signs are in a very crude condition. I intend to remedy this the present year so far as my appropriation will permit.

PAWTUCKET STREET GRADE CROSSING.

The crossing is now completed and has been paid for. (See table.)

PRINCETON STREET EXTENSION.

This beautiful drive is completed to the city line, and is taken advantage of by the wheelmen and teamsters. To be convinced of the appreciation of good roads by the bicyclists, one should stand on Princeton Street, near the club house, and observe the hundreds who ride back and forth on every pleasant evening. Such roads are a credit to our city.

SMOOTH PAVEMENT.

The demand for smooth pavement in the residential portions of our city is growing each year. During the past season 7,710 square yards of asphaltina pavement and 5,718 square yards of

asphalt have been laid on Gorham and Aiken Streets.

The City Council of 1898 voted and appropriated \$11,000 for the paving of Westford Street from Chelmsford Street to Smith Street, and also voted to pave Mammoth Road with smooth pavement from Fourth Avenue to Eighth Avenue. I have already alluded so the pleasure the macadamized road on Princeton Street gives the bicyclists, and the same may be said of the streets paved with smooth pavement.

STREET WATERING.

This department is self sustaining. The total receipts for 1898 were \$10,194.04, expenditures \$9,733.90. About twenty-five miles of streets have been watered each fair day.

MACADAMIZING ROGERS STREET.

This work which terminated at Berkeley avenue last year has been pushed forward to Nesmith Street, a distance of 2,582 feet. It is one of the best laid macadam roads in this vicinity, having a solid foundation, top dressed with Salem trap rock and thoroughly rolled. This street will last for years and has already been heartily commended by hosts of friends who believe in good roads, especially lovers of the wheel. The following will speak for itself:—

"At a meeting of the Good Roads League, held Thursday evening, Oct. 20th, it was voted:—

"That the thanks of the League be extended to the Mayor and Superintendent of Streets for the excellent work done on Rogers and Gorham Streets, and for the cycle path in Chelmsford Street.

"A true record,

"GEO. H. STEVENS,

"Secretary.

"Oct. 22, 1898."

WIDENING ANDOVER STREET.

The laying of tracks on Andover Street by the Lowell and Suburban Street Railway Company necessitated the widening of this street which has been one of the prettiest drives in Lowell.

The felling and removal of the many trees that stood within the new line of the street, also the excavation and removal of the high banks and the grading of the street progressed as fast as possible, and, undoubtedly, would have been completed had it not been for the unlooked for delay in the shipment of trap rock from Salem. As soon as the weather is suitable the work will be pushed to its completion; the street will then be one of the best in Lowell, and a source of pride to all who live on it or have occasion to pass through it.

EXTENSION OF BEECH STREET.

This was a long sought for improvement by the people of the vicinity, and was much needed, not only by those who live on the street but others who were directly benefitted by the extension. In extending this street through the estate of J. M. G. Parker we met with more difficulty than had been anticipated. The land being very springy it was necessary to remove a considerable portion and replace it with large rock and stone in order to have a good foundation or roadbed, which soon used up the appropriation for the work.

Having brought the street to a sub-grade, it remains to be completed as soon as the Lowell and Suburban Street Railway Company lay their tracks.

BICYCLE PATHS.

According to a resolution passed by the City Council, the first bicycle path in Lowell was laid on Chelmsford Street, from Plain Street to Lincoln Street, and at once met with the approval of every one who rides a wheel.

An order was also adopted that an appropriation of \$925 made for a path on each side of Bridge Street, between Merrimack Street and Central bridge. The work was begun but the sudden

approach of winter prevented the completion of these paths.

SEWERS AND DRAINS.

From March until the latter part of December this department was extraordinarily busy in the construction of sewers petitioned for by the people, and for which resolutions had been passed by the City Council on recommendation of the Committee on Sewers, consisting of Alderman Goward, Chairman, Alderman Dimon and Alderman Tuttle.

Construction was begun in the Oaklands district, and the Oaklands main sewer, begun in December, 1895, was completed by the building of 190 feet of double brick sewer, 45 in. x 30 in. diameter.

The completion of the Oaklands main made possible the construction of the Wentworth Avenue sewer, also the Mansur street and Parkview Avenue sewers, both of which were greatly needed. For length, size, depth, cost, etc., see table of sewers built during the year. The Oaklands main as now constructed only relieves the northerly slope of the Oaklands district, while the southerly slope, which is more thickly settled, has no means of sewage disposal save in the old fashioned and unsanitary way. In my 1896 report reference was made to the unsanitary condition of the Oaklands bordering on Rogers Street, and before this section can be relieved it will be necessary to construct a large

trunk sewer from the present main sewer at Andover Street across private lands to Rogers Street. As this contemplated sewer will necessarily be very expensive and require several seasons for construction, I recommend the new Oaklands main sewer as now petitioned for to the careful consideration of the City Government of 1899.

The Fifth Avenue and Avon Street sewer was constructed through almost solid ledge in Fifth Avenue, and in Avon Street through much water and quicksand, which added to the difficulty of construction. The above named sewer, however, was a great relief to that new settlement on the Emery land, including the new Moody Street schoolhouse.

The Tanner and Howard Street sewer, made necessary on account of the Board of Health ordering that the Hale and Howard Street sewers be taken out of River Meadow Brook, was laid from St. Hyacinth Street to Hale's Brook at an average depth of seventeen feet, and from St. Hyacinth Street to Howard Street, in Tanner Street, in blue clay and marl, the same material which made the intercepting sewer of 1884 so very difficult and expensive. This must be considered one of the heavy sewers of the season; it was built with 24-inch double thick, deep socket, salt-glazed clay pipe, laid upon a cradle of seven pieces of spruce, 2 in. x 4 in. x 12 in. long, the cradles being necessary to support the pipe and without which

the pipe after being laid to line and grade would disappear; in order to excavate the marl and quicksand met with, it was necessary to use 3-inch tongued and grooved sheathing, all of which made this piece of work very difficult and expensive. This sewer is not yet completed and before the Hale and Howard Street sewers can be taken out of the brook it will be necessary to lay iron pipe across and through the brook for a distance of about 175 feet, which can be done at a comparatively small cost when the water in the brook is low. The 16-inch iron pipe for the brook work is now on hand and paid for.

Another heavy, difficulty and necessarily expensive public improvement is the Shaw Street extension sewer, made necessary by the congested condition of the sewers in Stevens and Pine Streets. Solid ledge, encountered from the beginning almost to the end, and unavoidable deep cuts account for the difficulty and expense, and is the reason why other governments have fought shy of this important and absolutely necessary improvement. The building of this trunk sewer gave opportunity to construct the Pine Street sewer from near Stevens Street to Sanders Avenue. In the building of the Pine Street sewer 1672 feet of 24-inch double thick, deep socket pipe were used. This sewer was one of the most important and beneficial improvements of the year for several reasons; running

almost parallel with the Westford Street sewer, many of the laterals which discharge into Westford Street (already much overloaded) were diverted into the Pine Street sewer; thence through the new Shaw Street extension into the large trunk sewer in Shaw Street, and thence into the intercepting sewer. It also provides means of sewerage for a large and rapidly growing section of country south of Pine Street.

The Myrtle and Read Street Extensions in Centralville, made necessary by the Proprietors of the Locks and Canals filling in the Merrimack River from First street, were not constructed on account of the high water in the river, although the pipe for each sewer has been bought and is on the work. These extensions were ordered by the Board of Health and should be built into deep and swift running water as soon as possible.

In my report for 1896 attention was called to the frightful condition of the old (1850) stone drain across the tracks of the Boston and Maine Railroad and South Common. Early in the year the Commons Department requested that repairs be made on the stone drain across the common and under the pond, so that the pond might be filled and stay filled. For years the pond has been such only in name. I thoroughly overhauled this relic of other days from Howard Street to South street, cutting out portions that were use-

less and portions that were so crooked that water could not run through them, and finally cutting off the old drain crossing South Street and diverting it into the Summer Street brick main sewer. The pond does now and I believe forever will hold water, and the open ditch across the tracks of the Boston and Maine Railroad, which has been a menace to the public health, is replaced by a 24-inch pipe. In repairing the old stone drain, we used 625 feet of 24-inch pipe and spent \$2,800, which I consider the most judiciously spent money of the season.

The usual number of ordinary pipe sewers have been constructed during the year, and the number built and to be built is only limited by the amount of money appropriated for such work. The demands are growing in every section of our city and Sewer Committees for years to come will be obliged to exercise their best judgment in selecting sewers which are most needed, for to build all asked for in one year or ten years is out of the question with our limited means.

CATCH BASINS.

These small irons set in the curbstone and gutters play an important part in keeping our streets in a passable condition. Two hundred catch basins and cesspools were built last year at the proper place and grade given by the City

Engineer. Jan. 1st, 1899, there were 2,592 catch basins and cesspools to be maintained by the Sewer Department. The demands for these basins the coming season must be recognized. There are a great many places where public necessity requires that basins be built, and if my appropriation is large enough for such improvements I shall try and make them. Surface drainage for that portion of Pawtucketville in the vicinity of Moody Street is nearly complete. Basins have been built in nearly all the accepted streets where edgestones are laid. Surface drainage has also been provided in Gorham and Aiken Streets where the smooth pavement made it necessary.

SEWER MAINTENANCE.

At the beginning of the year 1898, the sum of \$14,000 was appropriated by the City Council for the [maintenance of sewers. This was a new departure, as heretofore money to maintain sewers has been taken from the regular appropriation and the receipts of the Sewer Department have been sufficient for that purpose. In caring for the sewers and catch basins six men and two single teams are employed the entire year, and in the winter season, when the work of cleaning out sewers is in progress, eleven men and one single team are added to the force. From Jan. 1st, 1898, to Jan. 1st, 1899, two hundred thirty-three

loads of sand, dirt and solid matter which could not flow to the outlet were removed from the so-called Marginal Street sewer. The Suffolk Street sewer from Liberty Square to the Aiken Street bridge, the Centralville Main sewer from Nineteenth Street to the river at Fulton Street, the sewer in Charles and Summer Streets, the Liberty Street sewer, parts of the Intercepting Sewer and other sewers have to be gone through and whatever solid matter is found has to be removed.

The following table will explain itself:—

Total number of basins	2,592
Number of loads removed from basins .	2,261
Number of basin connections repaired .	45
Number of basins and manholes repaired .	128
Number of sewers flushed	37
Number of culverts cleaned	5

In the schedule of personal property belonging to this department will be found various kinds of tools valued at nearly \$20,000. After a season's wear and tear they are brought to the tool house, given a general overhauling and put in first-class repair for another season's work. At the tool house there are employed an engineer, who attends to the repairs on hoisting engines, steam boilers, steam drills, etc., a blacksmith and helper, who work over and repair picks and drills and do the general blacksmith work of the department, and a

carpenter, who repairs the wood-working tools and builds trucks, carts and derricks. Last year the department added one new single cart and one large truck, suitable for moving engines and derricks, at a cost of \$450.

CONCLUSION.

I desire to express my gratitude to the City Engineer and his assistants, also to the Committee on Streets and Sewers for their hearty co-operation. Neither would I forget the foremen and workmen, for great credit is due them for the faithful performance of their duties.

Respectfully submitted,

CLEVELAND J. CHENEY,

Superintendent of Streets.

ANNUAL REPORT

OF THE

CHIEF ENGINEER

OF THE

FIRE DEPARTMENT,

OF THE

CITY OF LOWELL

FOR THE YEAR 1898.



LOWELL, MASS.:

LOWELL SUN PRINT: SUN BUILDING.

1899.

REPORT.

CHIEF'S OFFICE, PALMER ST. ENGINE HOUSE,
LOWELL, January 1, 1899.

To the City Council of the City of Lowell:

GENTLEMEN,—In accordance with the requirements governing the Fire Department, it becomes my duty, as Chief Engineer, to present to you the annual report of the Fire Department of the City of Lowell for the year ending December 31, 1898.

The report will be found to contain statements in detail, embracing the amount of expenditures, a register of the department, with age, residence and occupation of each member, a record of all fires and alarms which have occurred during the year and the cause thereof, with the names of the owners or occupants, the loss and insurance, as nearly as could be ascertained, with the number and location of the fire alarm boxes; also an inventory of all property of the department in charge of the several companies, and such information as is thought proper for your consideration,

The following statement will show the receipts and expenditures :

RECEIPTS.

Appropriations.....	\$120,003 44
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EXPENDITURES.

Pay Rolls.....	\$100,360 30
Water Works....	388 35
Hose, Pipes and repairs of same.....	1,242 33
Telephone	458 70
Express and Freight.....	70 95
Horses and use of same.....	631 00
Shoeing	1,298 52
Veterinary and Medicines.....	294 10
Hay, Straw and Grain	5,249 16
Harness and repairs of same.....	296 65
Furniture, etc.....	177 08
Coal and Wood	2,314 93
Gas	1,176 20
Printing	75 64
Repair on Apparatus and Houses.....	2,516 26
Laundry	173 98
Cloth, Buttons and Badges.....	189 93
Fire Alarm, repairs, etc.....	1,256 55
Oil, Sponges, Brooms, etc.....	890 58
Incidentals	308 33

Total Expenditure for the year.....	\$119,369 54
-------------------------------------	--------------

Transferred to General Treasury Fund.	633 90
---------------------------------------	--------

	\$120,003 44
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SALARIES OF MEMBERS OF THE FIRE DEPARTMENT.

Chief Engineer	\$2,000 00 per annum.
First Assistant Engineer.....	450 00 " "
Other Assistant Engineers.....	400 00 " "
Secretary of the Board of Engineers.....	25 00 " "
Foreman of the Companies (call).....	300 00 " "
Call Men.....	200 00 " "
Permanent Men.....	2 75 " day.
Foremen of Companies (permanent).....	3 00 " "
Engineers of Steamers (permanent).....	3 00 " "

The department is divided into two classes, Permanent and Call. The Permanent Force consists of

Chief Engineer,	24 Drivers,
1 Fire Alarm Operator,	13 Laddermen,
24 Hosemen,	6 Engineers of Steamers,
4 Patrolmen,	1 Driver for the Chief Engineer.

A total of 74, of which 14 are Captains and 12 Lieutenants.

The Call Force consists of

4 Assistant Engineers,	70 Hosemen,
27 Laddermen.	

A total of 101, of which 2 are Captains and 4 Lieutenants.

This makes a total of 175, divided into companies as follows:

- 6 Steam Fire Engine Companies, with Hose Reels.
- 5 Horse Hose Companies.
- 4 Hook and Ladder Companies, 2 with Chemical Engines attached.
- 1 Patrol Company.

The changes in the force during the year have been as follows :

Deaths.....	4
Appointed on Call Force.....	8
Transferred from Call to Permanent.....	2
Discharged.....	2

The apparatus is kept in the best possible condition, and consists at present of six Engines, six one-horse and one two-horse Hose Wagons, four two-horse Reels, one Babcock Aerial Truck, and three trucks of other patterns, two Chemical Engines, one Hale Water Tower, one Patrol Wagon and sleigh fully equipped, three Hose Pungs, eight Fuel Wagons, three Wagons and one Sleigh for use on fire alarm, one Wagon and Sleigh for Chief's use, and sixteen Fire Extinguishers. In reserve there are one two-horse and one one-horse Hose Reels.

FIRE-ALARM.

This branch of the service has been maintained in most excellent condition by the operator, Mr. H. C. Fernald, and has given perfect alarms the past year.

There have been one hundred and twenty-seven alarms given from signal boxes ; and No School signal has been given twenty-nine times the past year. Three new boxes have been placed in cir-

cuit the past year, numbered and located as follows :

147 Wentworth ave., cor. Glenwood street.

192 Eighteenth st., cor. Beacon street.

247 Parkview ave., cor. Hovey street.

Connected with the circuit there is one ten circuit non-interfering repeater, one ten-circuit cut-out and testing switch-board, twelve galvanometers, ten bell-strikers, fifteen large gongs for engine houses, eight small gongs, seventeen indicators, sixteen electro-magnets and connections for opening stall doors, twenty-three electric light current protectors, one hundred and thirteen public and eight private signal boxes, one hundred miles of wire, the whole supplied with a storage battery of four hundred cups.

There is also one large gong and indicator combined in the Police Station, one large gong at Pumping Station, Merrimack Square, Tower's Corner, and near the Northern Depot.

TELEPHONE.

There are connected with this system nineteen stations, consisting of transmitter, telephone bell, and battery; there are also twenty-two tap bells, for the rooms of the Engine Houses and about forty miles of wire owned by the city under the care of the Fire Alarm Operator, except the tele-

phones and transmitters, which are leased from the Telephone Company. The ringing line is supplied by a storage battery of one hundred cups.

HORSES AND HARNESSES.

There are sixty-four horses in the service of the department, thirteen of which belong to the Street Watering Department and are used by the department in bad weather for their keeping. Three new horses have been purchased the past year to take the place of three that had passed their usefulness for this department. Most of the horses now are in good condition, but the service required of them by enforced idleness that they are compelled to endure, and when called upon to respond to alarms is calculated to soon break them down and render them unfit for use in this department. There are twelve sets of double harnesses, ten sets of three-horse hitch harnesses, and four single swinging harnesses of the Berry and Hale patents.

PROTECTIVE DEPARTMENT.

This department is maintained by the city and consists of five permanent men. They have responded to one hundred and sixty-one alarms during the past year and have spread three hundred and eighty-six covers, have used seventy extinguishers,

and have been in service one hundred and seventy-four and one-half hours.

Chemical Engine C, attached to Truck 2, has used seventeen tanks. Chemical Engine B, attached to Truck 3, has used forty-nine tanks.

HYDRANTS.

During the year twenty-one new post hydrants have been added, making a total of eleven hundred and thirty.

The hydrants added are located as follows: Bridge street, two; Belrose avenue, Andover, Chelmsford, Fernald, Hanks, Manchester, Nesmith, Newell, Perkins streets, Penn avenue, one each, low service; one on Wyman street, high service, the other eight are private. Faulkner mills, four, Sterling mills three, and Lowell Hosiery one.

HOUSES.

The houses of the department are in very good repair.

HOSE.

The department will need two thousand feet of new hose the present year.

FIRES AND LOSSES.

The whole number of alarms of fire during the year ending December 31, 1898, was two hundred

and sixty-six (266) one hundred and twenty-seven alarms were given from the signal boxes, thirty-nine by telephone, ninety-three still and seven automatic alarms, a decrease of seventy-four from last year. The no-school signal was given twenty-nine times.

There were one hundred and twenty-six fires extinguished by chemicals and seventy-seven where water was used, the remaining number were extinguished by other means or had been put out before the arrival of the department.

The whole amount of loss was \$95,814.59; insurance \$2,000,307.49; loss above insurance \$4,285.10.

There has been nine alarms for fires out of the city, to which some part of the department has responded, the past year, for which no insurances are kept. Tewksbury 5, Dracut 3, and Chelmsford 1.

The three most notable fires during the year were the H. R. Barker Co. and the F. G. Mitchell Co. February 1st fire was discovered in the Barker Machine Shop by a lamp-lighter (who is also a call man in this department) returning from putting out his lights. It was snowing and blowing all night. Drifts from five to ten feet deep in our streets caused a great delay to the department responding, some companies being over an hour arriving at the fire, which should in good going have arrived in less than four min-

utes. The building was thoroughly on fire when discovered, and was doomed. A fight was made to keep the fire from extending to the adjoining buildings, one of which was a large five-story building belonging to the J. C. Ayer Co. It was the worst fire this department ever tackled, as in addition to the great depth of snow, it was snowing and blowing so hard that the smoke settled around the building so thick that the men could not get very near it without danger of being smothered, and for the same reason ladders could not be used. The alarm was rung in at 1.30 A. M., and the recall at 1.11 P. M. The cause of this fire was supposed incendiary, as this building was on fire Nov. 12, 1897, from an unknown cause. The F. G. Mitchell Co.'s department store, Feb. 21st, had a loss of \$588.36, caused by an electric wire grounding and setting the contents of one window on fire. April 19th, the same company suffered another loss of \$26,555.53, supposed from the same cause. Between these two fires automatic sprinklers had been put into the store, but the water had not been let on into the windows for fear of freezing. The heat was so intense it opened a number of sprinkler-heads in the store, and before the water could be shut off, it had caused a very large damage to the contents. If the water had been on the sprinklers in the window, the loss would have been very small. The

loss on these three fires was \$62,142.76. Deducting this amount from the total loss for the year would leave only \$33,671.83 to be divided among the remaining two hundred and sixty-three alarms, which I think demonstrates the efficiency of the department. In my last report I stated that the incendiary cases of Mr. J. H. Sullivan and Mr. T. J. Smith were sent to the Grand Jury. Both were indicted. Sullivan was defaulted, and Smith stood trial, receiving a sentence of not more than 18 years or less than 15 years. He tried to prove an alibi. There have been only two incendiary and two supposed incendiary fires the past year.

For further particulars in regard to fires and losses I refer you to the table annexed to this report.

The following will show the causes of the different alarms as near as could be ascertained.

Curtains set by gas jet.....	5	Gas leak.....	3
Meat and lard on stove....	2	False alarms.....	2
Children and matches.....	12	Fire crackers.....	8
Bonfire	1	Supposed incendiary.....	2
Brush	1	Explosion naphtha vapor...	2
Chimneys	26	Alarms for the same fire...	16
Hot ashes.....	8	Oil lamp explosion.....	19
Out of the city.....	9	Spark set stable....	1
Clothes in closet.....	5	Electric wires.....	5
Defective chimneys.....	5	Overheated thermostats....	2
Clothes and hot stove.....	7	Combustion	17

Rubbish	3	Sprinkler set thermostat...	1
Rats and matches.....	5	Water leak.....	1
Sparks set roof	10	Steam scaping.....	1
Unknown	18	Friction	1
Thawing pipe	2	Rocket set roof.....	1
Cigar stubs.....	1	Pot of lacquer.....	1
Beds	4	Drying plaster.....	2
Wires Crossed.....	5	Building fires with kerosene	
Stove smoking.....	9	oil	1
Cotton Picker.....	1	Defective motor.....	1
Spark set sleepers.....	1	Lantern exploded.....	1
Spark set bridge.....	1	Electric switch transformer.	1
Oil stoves.....	6	Electric lamps	4
Steam pipe.....	1	Overheated furnace.....	1
Careless use of matches...	2	Overheated fire place.....	2
Incendiary	2	Wood from boiler.....	1
Rekindled ..	2	Candle set clothes.....	1
Grass	9	Boreing hole with hot iron..	1
Shavings	2	Burning hornets' nest.....	1
No school.....	29		

Of the buildings in which these fires occurred, one hundred and sixty-eight were of wood and sixty-six of brick and stone.

WOODEN BUILDINGS.

BLOCKS, COTTAGES, ETC.		MILLS.	CHURCH'S	SCHOOL HOUSES.	SHEDS.	STABLES
1	Story, 1,758	1 Story 26	21	28	2,192	2,193
1 1-2	" 2,123	2 " 22				
2	" 3,482	3 " 44				
2 1-2	" 2,014	4 " 49				
3	" 896	5 " 3				
5	" 121					
4	" 9					
10,403		144	21	28	2,192	2,193

Total number of wooden buildings..... 14,981

An increase during the past year of..... 181

BRICK BUILDINGS.

BLOCKS, ETC.			MILLS.		CHURCHES.	SCHOOL HOUSES.	
1	Story	59	1	Story	21	20	22
2	“	114	2	“	64		
2	1-2	68	3	“	72		
3	“	200	4	“	48		
4	“	183	5	“	22		
5	“	31	6	“	26		
6	“	6	6	1-2	7		
661			260		20	22	

Total number of brick buildings..... 963

An increase during the past year of..... 2

STONE BUILDINGS.

Churches, 6; 1 Story, 2; 2 Story, 26; 3 Story, 8; 4 Story, 6.

Total number of stone buildings	48
Total number of buildings of all descriptions	15,992
An increase during the past year of	183

Some of these blocks have from four to twenty tenements.

The following table shows the number of alarms of fire each month:

January, 22; February, 21; March, 29; April, 23; May, 26;
June, 21; July, 28; August, 21; September, 25; October, 11;
November, 14; December, 25. Total, 266.

SERVICE OF THE DEPARTMENT FOR 1898.

FIRE DEPARTMENT

17

	Number of alarms attended.	Number of hours worked.	Feet of hose laid.	Hours of hydrants in use.	Number of extinguishers used.	Number of chemical tanks used.	Feet of ladders raised.	Hours engines worked.	Number of covers used.
Engine	36	17½	2950	2½	3			3½	
"	55	30½	4800	16½	6			5½	
"	150	86½	8650	30½	17			6	
"	77	53	5650	25	4			8	
"	28	26½	3850	2	3		286	2½	
"	75	53½	5550	9	8				
Hose	71	50½	6200	12	7				
"	70	35	6250	4½	8				
"	27	16½	1700	2½	2				
"	64	39	6300	15	6				
"	31	19½	2050	1	10				
Truck	35	32½				17	495		
"	2	47				49	1333		
"	156	125					1843		
"	51	34½					257		
Protective	161	174½			70		20		386
		834½	53-950	120½	144	66	4234	26	

During the past year four members of the department have answered their last roll call. Charles Morse, a member of Engine 4, joined the department May, 1865; died Feb. 19th. Charles Riley, a permanent Lieutenant of Hose 7, joined the department May, 1880; died Aug. 21st. D. F. Smith, call man on Hose 8, joined Jan. 1893; died Aug. 26th. Capt. S. E. Bartlett, a permanent Captain of Hose 8, joined the department, November, 1867, and, after a long and painful illness, passed from this world to the realms above, answering the last call that awaits us all. Delegations from each company in the department paid the last sad tribute of respect at their funerals.

Six men were injured the past year: Capt. D. W. Hilliard, Truck 2; Lieut. D. H. Crowley, Hose 8; Lieut. James Adams, Truck 4; F. W. Simons, Truck 3; P. Emerson, Hose 7, and Substitute Frank A. Farrell.

There were four deaths by burning: March 5, Daniel Mahan fell down stairs with a lamp; May 12, Mary Riley, 76 years old, lamp exploded; May 26, Ellen Anderson, same cause; October 13, P. F. Cunningham, making rubber cement, exploded, setting clothes on fire.

LOWELL FIREMEN'S FUND ASSOCIATION.

This benevolent association was organized Dec. 17, 1885, for the purpose of furnishing relief to such of its members as should receive injuries while in the discharge of their duties. The income is derived from an annual assessment upon each member and by donations from citizens and others, and in behalf of the members of the association I would return thanks to all those who have aided us in the past.

The following statement shows the amount standing to the credit of the association, Dec. 31, 1898.

Cash on hand May 1, 1898.....	\$20,871 93
Cash received to Dec. 31, 1898.....	1,402 76
Total.....	<hr/> \$22,274 69
Cash paid to Dec. 31, 1897.....	1,260 65
Balance undrawn Dec. 31, 1897.....	<hr/> \$21,014 04

CONCLUSION.

In conclusion I wish to say that the past year has been a very successful one, the discipline of the Department has been maintained and the duties of both officers and men have been cheerfully performed, and their united efforts have sustained the reputation of this Department, and I

desire to express my appreciation for the prompt and efficient manner in which they responded to all alarms, to the Mayor, City Council, City Clerk, Auditor, Treasurer, Superintendents of the different departments, Police Department and all others who have in any way assisted me in the discharge of my duties I extend my most sincere thanks.

Respectfully submitted,

EDWARD S. HOSMER,

Chief Fire Department.

Schedule of Fires which have occurred in the City of Lowell, during the Year ending] December 31, 1898.

Date 1898	Time	Signal	Re-call	Location	Wood, brick or stone	Owned by	Occupied by	Dwelling	Occupied as	Loss	Insurance	Insurance Paid	Cause of fire	Remarks	
Jan.	1 5.50 p m	Still	7.22 p m	Calby st....	Wood	W. Wright Estate...	Nash...	Boarding House...	Chimney	\$150 00	\$3,200	\$150 00	Gas-jet and evergreen		
	6 10.09 p m	145	10.15 a m	Payette st...	"	J. A. Coram...	F. P. Cheney...	Box Shop...	Wood pile caught from boiler				Same fire		
	12.17 p m	Still	12.31 p m	Dutton st...	Brick	Merrimack Corp...	W H Boody...	Hotel	Wires crossed	175 00	32,700	175 00	Overheated fire-place	Out of the city	
	9 4.16 p m	Aut.		Tanger st...	"	"	Taylor & Barker...	Dwelling...	Oil lamp				Unknown	Out of the city	
	10 9.50 p m	47	11.37 p m	Merrimack st...	Wood	H. Cheney Estate	Several	Stable	Overheated fire-place	107 60	4,000	107 60	Combustion of rags	Out of the city	
	13 11.09 p m	Still		Perryshury...	Brick	R. G. Bartlett...	J A Gregoire	Stable Paint Shop	Ice House				Unknown		
	13 8.50 a m	Still		West Fourth st	Wood	D. Gage...	D Gage	"	"				Box pulled for Gage's fire		
	18 7.55 p m	Tel.	8.10 p m	Draut	"	"	Several	"	"				No school		
	20 12.45 p m	222		Draut	"	"	Several	"	"				No school		
	20 6.05 p m	222		Market st...	"	"	Several	"	"				No school		
	23 12.50 a m	Still		Alken st...	"	Gahill Bros	Several	Dwelling	Run and hot stove				Hot stove		
	25 9.17 a m	28	9.27 a m	Merrimack st...	Brick	Locks and Canals	William Bascom Est...	Stores and Rooms	Stores and Rooms				Smoke under floor		
	26 12.45 p m	222	11.25 p m	Still	"	"	Mrs. M Barrett	Dwelling	Dwelling				False alarm		
	26 12.45 p m	222		Walson st...	Wood	"	Mrs. M Barrett	Stable	Dwelling	262 20	1,600	262 20	Chimney		
	28 11.32 p m	53	11.51 p m	Winter st...	"	W. M. Corey	G Carr	Dwelling	Dwelling	300 00	4,700	300 00	Unknown		
	29 10.00 a m	52	10.08 a m	Gabor st...	"	M. Cooney	M Cooney	"	"				Oil stove		
	30 10.45 a m	216	10.08 a m	Lawrence st...	"	"	Mrs Hollich	"	"				Thawing water pipe		
	31 3.54 a m	225	4.04 a m	Church st...	"	J. B. Hunt	"	"	"	181 00	6,000	181 00	Combustion of rags		
	31 6.05 p m	Tel.		Gorham st...	"	"	T. Carrauthers	"	Grocery	40 00			No school		
	12.45 p m	222		"	"	"	"	"	"				Oil lamp		
	Feb.	1 1.30 a m	56	1.11 p m	Middle st...	Brick	Mrs. H. R. Barker...	H R Barker Co	Machine Shop...	Machine Shop...	33,736 85	35,498	32,664 19	Incendiary, supposed	
		6 6.40 a m	Tel.		Adelle st...	"	J. C. Ayer Co...	J C Ayer Co...	Patent Medicines...	Patent Medicines...	24 62	3,500	24 62	Water damage from other fire	
		7 7.45 a m	19	7.21 a m	Central st...	Wood	H. McSorley Estate...	Mrs H McSorley	Dwelling	Dwelling	375 00	3,500	375 00	Defective chimney	
		12.45 a m	222		Central st...	"	"	Several	Stores and Dwelling	"	242 76	2,880	242 76	Same fire	
		6.05 p m	222		Worthen st...	Wood	"	J H Lynch	Boarding House...	Boarding House...				No school	
		5 9.06 a m	Aut.	11.25 a m	Shattuck st...	"	Card Clothing Co...	Several	Stores and Rooms	Stores and Rooms	181 00	6,000	181 00	Red, supposed smoking	
		6 8.54 a m	25	9.05 a m	Central st...	Brick	W. A. Spalding	"	Stores and Dwelling	Stores and Dwelling	15 00	100	15 00	Electric wire set awning	
		8 6.09 p m	39	6.17 p m	Fulton Place...	Wood	O. Allen & Son...	"	Dwelling	Dwelling				Hot stove and wood-pile	
		15 6.10 p m	51	6.24 p m	Congress st...	"	Greenwood Bros	"	"	"	15 00	1,000	15 00	Bed	
		16 7.46 a m	222		"	Wood	"	"	"	"				No school	
		17 4.55 a m	Still		Middlesex st...	Wood	S. K. Dexter...	Several	Bakery	Bakery	20 00	1,000	20 00	Overheated furnace	
19 11.02 p m		Still	11.10 p m	Market st...	Brick	P. Cummiskey	Several	Store and Dwelling	Store and Dwelling				Chimney		
21 5.08 a m		15	5.15 a m	Merrimack st...	"	Dartmouth College	H Richardson	Restaurant	Restaurant				Same fire		
7.48 a m		222		"	"	"	"	"	"				Range smoking		
12.45 p m		222		"	"	"	"	"	"				No school		
6.05 p m		222		Merrimack st...	"	F. G. Mitchell & Co...	Bon Marche Co	Fancy Goods	Fancy Goods	175 00	46,936 25	175 00	Electric wire set window		
6.12 p m		Still		"	"	"	"	"	"	413 36	111,680	413 36	Same fire		
6.17 p m		21	6.54 p m	Merrimack st...	"	"	"	"	"				Same fire		
6.20 p m		56	6.34 p m	Merrimack st...	"	W. Bascom Estate...	O'Donnell & Gilbride	"	"				Defective electric lamp		
5.55 p m		Still		"	"	"	"	"	"				No school		
5.55 p m		222		"	"	"	"	"	"				No school		
7.45 a m		222		Middlesex st...	"	C. A. Scott	Several	Stores and Rooms	Stores and Rooms				No school		
12.45 p m		Still		High st...	"	"	Several	"	"				Smoke		
9.43 p m		Still		Merrimack st...	"	O'Donnell & Gilbride	O'Donnell & Gilbride	Fancy Goods	Fancy Goods				Defective electric lamp		
8.43 p m		Still		"	Wood	G. S. Kimball	Several	Dwelling	Dwelling	25 00	1,000	25 00	Spark set roof		
Mar.		1 12.35 a m	Still		Second ave...	"	Butler Smith	Butler Smith	Dwelling	Dwelling				Lamp exploded	
		5.50 p m	139	6.08 p m	Common st...	"	T. Fennessey	T Fennessey	Stable	Stable				Meat on stove	
		9.17 p m	Still		Smith st...	"	W. Manning	W Manning	Dwelling	Dwelling	175 00	400	175 00	Lamp exploded	
		9.42 p m	Still		Plain st...	"	W. Kemmisson	W Kemmisson	"	"	23 29	300	23 29	Same fire	
		9.44 p m	134	10.21 p m	Plain st...	"	"	"	"	"	33 15	4,800	33 15	Cotton picker	
		2 2.35 p m	Still		Middle st...	Brick	J. Tyler Stevens	L W Hawks	Mattress Manfy	Mattress Manfy				Children and matches	
	3 12.15 p m	35	4.30 p m	Chapel st...	Wood	A. C. Wheelock	Unoccupied	Boarding House...	Boarding House...	29 75	5,100	29 75	Oil stove		
	5 9.12 p m	139	5.22 p m	Lawrence st...	"	Mrs. A. V. Partridge	Unoccupied	Dwelling	Dwelling				Oil lamp		
	7 5.34 a m	154	5.44 a m	Adams st...	Brick	Mrs. O'Hare	D Mahan	"	"				Automatic set off alarm		
	9 6.35 a m	Still		Rock st...	"	C. H. Allen	C H Allen	Mill	Mill				Fat on stove		
	10 3.45 p m	Still		Central st...	"	Carlton Estate	T F Holan...	Store Room...	Store Room...				Stove smoking		
	13 9.56 a m	64	10.08 a m	Salem st...	Wood	M. E. & H. A. Eastman	Several	Dwelling	Dwelling				Clothes in closet		
	14 12.07 p m	94	12.15 p m	First st...	"	P. Manning	Several	Grass	Grass				Grass set by boys		
	12.50 p m	Tel.		Bridge st...	"	"	"	"	"				Grass set by boys		
	1.25 p m	Still		Mt Grove st...	"	J. R. Chase	"	"	"				Grass set by boys		
	1.25 p m	Still		Billings st...	"	J. R. Bartlett	"	"	"				Grass		
	6.38 p m	49	6.49 p m	Chestnut st...	"	J. Tyler Stevens	Mrs A E Lullian...	Dwelling	Dwelling	39 50	9,000	39 50	Gas-jet set cold air box		
	5.08 p m	Still		Wt Manchester st	"	J. R. Coburn	"	"	"				Grass set by boys		
	12.10 p m	Still		Stevens st...	"	C. W. W. Melanson	"	"	"				Grass set by boys		
	10.55 p m	Still		Palmer st...	"	O'Donnell & Gilbride	"	"	"				Defective electric lamp		
	12.03 p m	Still		Bowden st...	"	Several	"	"	"				Brush		
	9.12 p m	82	9.26 p m	Warren st...	Wood	Jennie Nanas	Several	Dwelling	Dwelling	25 00	2,000	25 00	Candle and clothes		
	11.18 p m	Tel.		Warren st...	Brick	J. Tyler Stevens	"	"	"	"				Smoke	
	1.00 p m	Still		Maple st...	"	S. E. N. H. & H. R. R.	"	"	"				Combustion		
	2.13 p m	Still		East Merrimack st	"	Locks and Canals	"	"	"				Combustion of painter's clothes		
	11.19 p m	16	12.25 p m	Hyacinth st...	Wood	Rushworth Estate	Unoccupied	Box Shop	Box Shop				Wires crossed		
	7.45 a m	Aut.	11.25 p m	Middlesex st...	Wood	F. P. Cheney	F P Cheney	Dwelling	Dwelling				No school		
	11.22 p m	72	11.30 p m	"	"	A. C. Wheelock	Several	"	"						

Schedule of Fires which have occurred in the City of Lowell, during the Year ending December 31, 1898.

Date 1898	Time	Signal	Re-call	Location	Wood, brick or stone	Owned by	Occupied by	Occupied as	Loss	Insurance	Insurance Paid	Cause of fire	Remarks
June 21	6.40 p m	Still		First st.	Wood	Locks and Canals	S N Proctor	Dump				Combustion	
	12.40 p m	Tel.		Warwick st.	"	G F Penniman	Several	Dwelling	\$11 91	\$1,500	\$11 91	Lightning	
	1.07 p m	Still		West Fourth st.	"	E Haggood & Son	E Haggood & Son	Matress Manuf'ry				Stove smoking	
	6.28 p m	Tel.		Laurence st.	"	Gerrish Estate	J J Sanborn	Awning				Electric light wire	
	7.00 p m	Still		Central st.	Brick	Gerrish Estate	J J Sanborn	Shed	361 00	700	161 00	Asbes in barrel	
	2.19 a m	Still		Ford st.	Wood	B and M R R	Several	Bridge	8 00	1,200	8 00	Spark set roof	
	4.15 p m	Still		Graham st.	"	Thos Maxwell	Several	Dwelling	390 50	2,850	390 50	Spark set roof	
	7.40 p m	Still		Laurence st.	Brick	H B Shattuck	Miss G M McDouald	Boarding House				Unknown	
	8.50 p m	113		John st.	"							Unknown	
												Out of the city	
July 2	11.16 a m	Tel.		Dracut	Wood	G B Coburn	Brennan Bros	Shoe Manuf'ry				Fire-crackers	
	5.55 a m	139		Adams st.	"	A L Harris	Mrs Beane	Dwelling	173 00	1,000	173 00	Lamp knocked off table	
	11.01 p m	6		Broadway	"	J Gates Estate	Several	"	4 00	500	4 00	Fire-crackers set paper	
	10.53 a m	25		Tremont st.	"	J Gates Estate	"	Dump				Combustion	
	12.13 p m	Still		Short st.	"	Mrs E J Donnelly	Mrs H Queenan	Dwelling	10 00	2,000	10 00	Fire-crackers set roof	
	12.20 p m	37		Maple st.	"	Mrs H Queenan	Mrs H Queenan	Bridge	20 00	2,500	20 00	"	
	6.37 a m	225		Suffolk st.	"	City of Lowell	George Dawson	Dwelling	4 45	1,000	4 45	Olgar stub	
	7.50 a m	Still		Newhall st.	"	W T Dudley	W T Dudley	House and Barn				Unknown	
	2.12 p m	Tel.		Tewksbury	"	Mrs H McKearney	J E Venn	Awning				Fire-cracker	
	6.10 p m	48		Grove st.	"	Mrs M Doyle	Philip Harley	Dwelling				Fire-cracker	
July 4	8.57 p m	Still		Lincoln st.	Brick	Mrs M Doyle	Philip Harley	Dwelling				Fire-cracker	
	9.23 p m	"		Gorham st.	"	A E Bigshaw	Philip Harley	Dwelling				Fire-cracker	
	11.35 p m	56		School st.	Wood	Philip Harley	Philip Harley	Dwelling				Fire-cracker	
	1.57 p m	51		Crosby st.	"	P Sheehan	P Sheehan	Dwelling				Fire-cracker	
	3.54 p m	"		Lyon st.	"	P Riden	P Riden	Dwelling				Fire-cracker	
				"	"	P Tyghe	P Tyghe	Dwelling				Fire-cracker	
				"	"	M Leonard	M Leonard	Dwelling				Fire-cracker	
				"	"	Hove Bros Estate	Several	Stores and Dwelling				Fire-cracker	
				"	"	G P White	Frank Knapp	Boarding House				Fire-cracker	
				"	"	Mrs O Gaudette	F Therault	Grocery				Fire-cracker	
July 8	8.11 a m	24		Middlesex st.	Brick	E Dalgle	City	Dwelling	25 96	500	25 96	Defective chimney	
	2.55 p m	13		Bridge st.	"	A C Wheelock	A C Wheelock	Dwelling	323 44	25,000	323 44	supposed cigar stub	
	3.43 p m	28		Tucker st.	Wood	E T Gayard	A Dalgle	Dwelling	15 00	16,000	15 00	Defective chimney	
	4.09 p m	24		Tewksbury	"	O'Brien	Mrs Dillon	Dwelling	74 90	3,000	24 90	Unknown, clothes in chair	
	2.08 a m	241		Tewksbury	"	"	"	Dwelling				Child dropped lamp	
	2.08 a m	241		Tewksbury	"	"	"	Dwelling				Children set rags	
	6.10 p m	28		Hall st.	"	"	"	Dwelling				Same fire	
	1.26 p m	25		Merrimack st.	Stone	"	"	Dwelling				Child and matches	
	1.17 p m	25		Central st.	Wood	"	"	Dwelling				Incendiary	
	1.11 p m	Tel.		Middlesex st.	"	"	"	Dwelling				Incendiary	
July 11	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
	9.18 p m	24		Tucker st.	Wood	"	"	Dwelling				Combustion of hay	
July 12	1.07 p m	25		Central st.	Wood	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
	1.11 p m	24		Middlesex st.	"	"	"	Dwelling				Combustion of hay	
July 17	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
	5.35 p m	24		Waverlet st.	Wood	"	"	Dwelling				Combustion of hay	
July 19	6.06 p m	Still		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
	6.06 p m	131		Davidson st.	"	"	"	Dwelling				Combustion of hay	
Aug. 1	8.05 p m	Still		Mr. Grove st	"	T Carrete	T Carrete	Stable				Lantern kicked over	
	9.06 p m	25		Merrimack st.	Brick	E P. Sanborn	Mrs Smith	Dwelling				Chimney	
	6.40 p m	31		Merrimack st.	"	Wynan Estate	G H Miller	Confectionery				Stove smoking	
	4.08 a m	Aut.		Middle st.	"	Mrs H R Barker	H R Barker Co	Machine Shop				False alarm	
	8.06 p m	Still		Prinse st.	"	Merrimack Corp	Unoccupied	Awning	5 00	67,500	5 00	Sprinkler	
	11.40 p m	23		Lakeview ave	Wood	C Callahan	Unoccupied	Shed				Combustion	
	1.37 p m	39		Broadway	"	J L Labarge	Unoccupied	Dwelling	300 00	3,500	150 00	Children and matches	
	1.43 p m	5		Cushing st	"	B and M R R	Swift and Ratley	Store House				Spark set roof	
	1.51 p m	54		School st	"	B and M R R	Swift and Ratley	Store House				Spark set roof	
	3.00 p m	Still		Middlesex st.	"	C O Ball	Miss Way	Machine Shop	1,313 00	5,000	1,313 00	Oil stove	
Aug. 10	10.22 a m	127		Fourth ave.	"	J P Fowler	Charles Dainton	Dwelling	37 85	600	37 85	Child and matches	
	4.10 p m	127		Fourth ave.	"	J P Fowler	Charles Dainton	Wax Exhibition				Lamp and curtain	
	7.47 p m	12		Middle st.	Brick	Burke Timp'nce Asso	F M Bill	Grocery				Same fire	
	7.47 p m	12		Middle st.	Brick	Burke Timp'nce Asso	F M Bill	Grocery				Matches in coat pocket	
	1.30 p m	Still		Hyacinth st.	"	F P Cheney	F P Cheney	Box Shop				Rewiring	
	10.37 p m	Aut.		West Third st.	Wood	H Murphy	Several	Old Mattress				Children and matches	
	9.17 p m	23		Middlesex st.	Wood	J Boyle	Several	Dwelling				Oil stove	
	7.54 a m	42		Middlesex st.	"	C G. Clark	Several	Dwelling				Stove smoking	
	5.35 a m	Still		Moody st.	"	"	"	Dwelling				Stove smoking	
	5.35 a m	Still		Moody st.	"	"	"	Dwelling				Stove smoking	
Sept. 1	10.30 p m	Still		Common st.	Wood	J J Maguire	"	Dwelling				Chimney	
	11.15 a m	Tel.		Merrimack st.	Brick	G Kimball Estate	O'Sullivan Bros	Shoe Store				Stove smoking	
	9.07 p m	25		Flanover st.	Wood	P Vigeant	Several	Dwelling	15 00			Oil lamp and bed	
	6.10 p m	161		Faulkner st.	Brick	Faulkner & Sons	F and J A Faulkner	Mill	7 00 00	3,008	666 80	Friction of belt and pulley	
	11.46 a m	56		Middle st.	"	Win Kitzreige Estate	Derby & Morse	Electrical Supplies	1,622 55	7,800	1,622 55	Part of laquer caught fire	
	11.47 a m	Still		Middle st.	"	"	"	Printing				Same fire	
	8.10 p m	Still		Faulkner st.	"	Faulkner & Sons	F and J A Faulkner	Mill				Combustion of cotton hales	
	12.31 p m	Tel.		Maiden Lane	Wood	P Dempsey	P Dempsey	Dwelling				Spark set roof	
	2.40 p m	7		Mt. Vernon st.	"	O Allen and Son	O Allen and Son	Box Shop				Same fire	
	1.25 p m	Still		Lane st.	"	Mrs. Farley	J B Cover	Rubbish				Spark set shavings	
Sept. 15	2.55 a m	"		Shattuck st.	"	J B Cover	J B Cover	Grain Store				Combustion	
	4.34 a m	"		Merrimack st.	"	C K Russell	Several	Dwelling				Water leak	
	1.40 p m	145		Middlesex st.	Brick	O Allen	O Allen	Dwelling	1,046 38	3,700	1,046 38	Clothes in closet	
	7.12 a m	Still		Pollard ave	Wood	Nesmith Estate	Tom Allen	Dwelling	300 00	1,500	300 00	Rats' nest	
	7.12 a m	Still		Pollard ave	Wood	Nesmith Estate	Tom Allen	Dwelling				Chimney	
	7.31 p m	Tel.		Central st.	Brick	O Allen	O Allen	Dwelling				Defective motor	
	7.45 a m	222		Middlesex st.	"	O Allen	O Allen	Dwelling				Rebuddled in sawdust	
	8.13 a m	92		Boynton st.	Wood	Nat. Peabody	Nat. Peabody	Dwelling				Child set hed	
	7.15 p m	Still		Griffin st.	"	J Griffin	Mrs H L Williams	Dwelling	22 22	2,000	22 22	Defective fireplace	
	7.15 p m	33		Nesmith st.	"	Mrs H L Williams	Unoccupied	Stable	725 00	3,000	725 00	Burning horns' nest	
Sept. 25	4.36 a m	Tel.		Walker st.	"	A H Lynch Estate	Unoccupied	Saw Mill				Unknown	
	7.15 p m	225		Chelmsford st.	"	Mrs C Murphy	A L Brooks Co	Dwelling	285 00	3,500	285 00	Combustion of rubbish	
	6.14 p m	131		Suffolt st.	"	J B Swift	J B Swift	Pool Room				Gas leak	
	5.53 p m	84		Marshall st.	"	Mrs M M Brown	Several	Dwelling				Rags caught from chimney	
	1.27 a m	121		Dutton st.	Brick	Hall and Perham	J Parker	Store Room				Gas leak	
	9.50 p m	Still		Maple st.	"	N Y N H & H R R	J Parker	Dump	711 65	5,300	711 65	Combustion	

FIRE DEPARTMENT,

JANUARY 1, 1899.

CHIEF ENGINEER.

EDWARD S. HOSMER { Office, Palmer Street Engine House.
Residence, 202 Westford Street.

ASSISTANT ENGINEERS.

James F. Norton . . . Residence, 18 Ames Street
George F. Salmon . Residence, 95 Mt. Washington Street
Edward Meloy . . . Residence, Fort Hill Avenue
Henry W. Burton . . . Residence, Kimball Avenue

CHIEF'S DRIVER.

H. B. Sanders . Residence, Palmer Street Engine House

TELEGRAPH OPERATOR.

Henry C. Fernald . Residence, Palmer Street Engine House

COMMITTEE ON FIRE DEPARTMENT, 1898.

ALDERMEN—Derby and Cosgrove.

COUNCILMEN—Wilder, Whittet and Farley.

ENGINE COMPANY No. 1.			HOUSE ON GORHAM STREET.	
TWELVE MEMBERS.				
Badge.	Rank.	Name.	Age.	Occupation.
15....	Captain.....	C. D. Foley.....	44	Carpenter
11....	Lieutenant....	T. W. Collins.....	42	Permanent
1....	Clerk.....	Geo. W. Lovett.....	48	Driver, Wagon..
119....	Engineer.....	J. W. Jantzen.....	45	Permanent
12....	Driver.....	J. J. Lowney.....	30	Driver, Engine..
17....	Ass't Engineer	T. McNamara.....	54	Machinist
19....	Hoseman	C. F. Donohoe.....	36	Teamster
16....	Hoseman	T. Carruthers.....	53	Stamper.....
14....	Hoseman	P. Curtin.....	46	Moulder
13....	Hoseman	J. E. Burns.....	29	Expert
18....	Hoseman	Robt. Oatley.....	37	Laborer.....
10....	Hoseman	B. J. Brady.....	41	Permanent
....	Substitute	Wm. H. Kirkpatrick.	29	.....
....	Substitute	James A. Shea.....	23	.....
				Joined Dept.
				Residence.
				31 Newhall Street
				Engine House
				Engine House
				Engine House
				Engine House
				Engine House
				Lawrence Street
				63 Pine Hill Street
				Engine House
				Lawrence Street
				882 Gorham Street
				82 Blossom Street
				Engine House
				Dec., 1897..
				Jan., 1893 ..
				Dec., 1897..
				Dec., 1897..

SCHEDULE OF PROPERTY

Belonging to the City, in care of Engine Company No. 1.

Engine built by Union Machine Company, Fitchburg, Mass; has two double-acting steam cylinders, 7 1-8 inches in diameter, 8 inch stroke, two double-acting pumps, 4 3-8 inches in diameter, arranged to work separately or together; weight when loaded, 7,180 pounds; 1 one-horse hose wagon, built by Abbott-Downing Co., Concord, N. H.; 4 horses, 1 set double and 3 single harnesses, 1 pair lead bars, 5 blankets, hose sleigh, fuel wagon, four-way chuck, branch connection; 3 pipes with stop nozzles, 12 1-2 inch caps; 1 5x2 1-2 inch reducer, 4 small reducers, 6 spanners, 8 lanterns, 4 wrenches, 6 ladder straps, 2 bars, 2 axes, bucket, 1,750 feet 2 1-2 inch cotton hose, 100 feet 1-inch rubber hose, set blocks, extinguisher, 6 beds and bedding, mirror, 2 bureaus, 18 chairs, 3 shovels, fork, 4 brooms, 30 feet of rope, 2 pails, 1 12-foot ladder, step ladder, steam boiler, coal hod, 2 ash cans, 4 boxes, 2 blocks, jack screw, carriage jack, copper goose neck, basket, work bench, vise, chisel, pair shafts, hose washer, three horse pole, 6 spittoons, 2 oil cans, 26 badges, 12 set buttons, 3 insignia, 3 stable cans, 6 smoke protectors, and all tools for cleaning horses and repairing engine.

ENGINE COMPANY No. 2.			HOUSE ON BRANCH STREET.			
TWELVE MEMBERS.						
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
20....	Captain.....	A. C. Stearns.....	58	Permanent.....	Nov., 1862..	Engine House
21....	Lieutenant ...	F. B. Akers.....	44	Permanent.....	May, 1878..	Engine House
2....	Clerk	H. Boynton.....	47	Driver, Wagon..	April, 1869..	Engine House
29....	Engineer.....	C. S. Hibbert.....	53	Permanent.....	Nov., 1865..	Engine House
90....	Driver	F. Boynton.....	37	Driver, Engine..	Dec., 1882..	Engine House
28....	Hoseman	A. Jamison.....	41	Painter	Dec., 1894..	52 Lane Street
22....	Ass't Engineer	H. R. Morrison....	39	Machinist	July, 1882..	School Street
23....	Hoseman	E. E. Maynard.....	37	Clerk	May, 1883..	18 East Pine Street
27....	Hoseman	A. S. Maynard.....	45	Carpenter	Nov., 1884..	18 East Pine Street
25....	Hoseman	W. H. Oakes.....	33	Machinist	Dec., 1893..	36 Smith Street
24....	Hoseman	W. L. Hills.....	33	Bottler.....	Mar., 1891..	New Nichols Street
26....	Hoseman	C. E. Alway.....	34	Carpenter	Feb., 1889..	East Pine Street
....	Substitute	C. E. Bugbee.....	38	.....	Dec., 1894..	
....	Substitute	W. H. Parker	22	.....	Jan., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Engine Company, No 2.

Engine built by Manchester Locomotive Works, Manchester, N. H. ; weight when loaded, 7.600 pounds ; 6 7 8 inch cylinder, 8-inch stroke, 4 1-2 inch double-acting pumps, two-horse hose carriage built by Leverick & Co., New York ; 1600 feet 2 1-2 inch cotton hose, 50 feet 3-4 inch rubber hose, hose sleigh, fuel wagon, four-way chuck branch connection, 4 pipes, 6 spanners, 6 ladder straps, 2 hydrant wrenches, axe, 2 bars, jack screw, lead bars, three-horse pole, 6 coal boxes, 12 chairs, 3 mirrors, 3 clocks, work bench, vise, 5 beds and bedding, lathe, heater and tank, steam boiler, 2 sets blocks, 4 ash cans, table, 24 badges, 16 sets buttons, 8 insignia, hose washer, pair skids, pair steps, extinguisher, 3 smoke protectors, 4 stable cans, and all tools for cleaning horses and repairing engine.

TWELVE MEMBERS.			ENGINE COMPANY No. 3.		HOUSE ON PALMER STREET.	
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
30....	Captain	F. Hoyt	50	Permanent.....	Aug., 1873..	Engine House
31....	Lieutenant....	O. A. Knapp.....	34	Permanent.....	July, 1889..	Engine House
3....	Clerk	L. C. Brainard.....	40	Driver, Wagon..	Feb., 1889..	Engine House
33....	Engineer.....	M. I. Collins.....	43	Engineer	April, 1888..	Engine House
133....	Driver.....	B. C. Reed	45	Driver, Engine..	Aug., 1885..	Engine House
34....	Ass't Engineer	J. G. Merchant....	60	Engineer	April, 1887..	Westford Street
37....	Hoseman	F. E. Roark	49	Lighter	July, 1875..	Middle Street
38....	Hoseman	G. T. Halstead....	41	Permanent.....	Nov., 1883..	Engine House
35....	Hoseman	J. D. Ismond.....	31	Packer	Mar., 1894..	Andover Street
32....	Hoseman	F. E. Turner.....	35	Clerk.....	July, 1892..	Hamilton Corp.
36....	Hoseman	A. E. Dearth.....	38	Carpenter	June, 1891..	Dutton Street
30....	Hoseman	M. C. Rowell.....	35	Janitor	April, 1894..	Merrimack Street
....	Substitute	A. Dore	22	.....	Feb., 1898..	
....	Substitute	F. A. Farrell.....	30	.....	April, 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Engine Company, No. 3.

Engine built by Manchester Locomotive Works, Manchester, N. H.; weight when loaded, 9,300 pounds; 35 feet suction hose with hydrant couplings, 1 one-horse hose wagon, 5 horses, set three-horse hitch and set double harnesses, 4 halters, 5 blankets, 1,200 feet 2 1-2 inch cotton hose, four-way chuck and reducer, reducer and cap, six-way Lowry chuck, 4 pipes, 2 stop nozzles, 2 branch connections, 2 hydrant wrenches, 4 spanners, bar. shovel, 4 ladder straps, 6 lanterns, 3 stable cans, 6 beds and bedding, 2 mirrors, 2 clocks, 15 chairs, hose rope, monkey wrench, carriage jack, 26 badges, 12 set buttons, 8 insignia, hose washer, extinguisher, 3 smoke protectors, and all tools for cleaning horses and repairing engine.

TWELVE MEMBERS.			ENGINE COMPANY No. 4.		HOUSE ON HIGH STREET.	
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
40....	Captain	J. E. Burns	38	Permanent	Feb., 1882..	Engine House
42....	Lieutenant ...	J. E. Sullivan	46	Permanent	May, 1883..	Engine House
4....	Clerk	W. King	56	Driver, Wagon..	Nov., 1863..	Engine House
41....	Driver	J. J. Harrington	48	Driver, Engine..	Nov., 1869..	Engine House
134....	Engineer.....	F. F. Prescott	39	Engineer	July, 1893..	Engine House
44....	Hoseman	M. Connors	48	Plasterer	Mar., 1883..	Pleasant Street
43....	Hoseman	W. T. Dolan	27	Plumber	Nov., 1894..	Concord Street
46....	Hoseman	J. P. Smith	35	Clerk	Sept., 1886..	Concord Street
48....	Ass't Engineer	T. Tighe.....	41	Finisher.....	Dec., 1888.	Concord Street
49....	Hoseman	B. F. Freeman	54	Lighter	Jan , 1893..	Fort Hill Avenue
....	Hoseman	J. M. G. Burns.....	26	Clerk	July, 1897..	Engine House
45....	Hoseman	J. E. Brown.....	25	Clerk	Aug., 1897..	31 Fort Hill Ave.
....	Substitute	J. H. Tracy	32	.....	Aug., 1897..	
....	Substitute	M. Eagan.....	35	...	April, 1898.	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Engine Company, No. 4.

Engine built by Manchester Locomotive Works, Manchester, N. H. ; weight when loaded, 8,000 pounds, 6 7 8 inch cylinder, 8-inch stroke, 4 1-2 inch double-acting pumps ; one-horse wagon built by Abbott-Downing Co., Concord, N. H. ; 5 horses, set three-horse hitch and set double harnesses, 1,500 feet cotton hose, 50 feet rubber hose, carriage jack, 2 clocks, 2 mirrors, table, 16 chairs, 2 dusters, 6 shovels, 4 pails, 5 spittoons, fuel wagon, 6 beds and bedding, bureau, 12 set buttons, 26 badges, 4 insignia, 12 spanners, 5 ladder straps, jack screw, 7 coal boxes, 50 feet rope, 1 5x2 1 2 inch reducer, hose washer, extinguisher, 5 blankets, bench and vise, steam boiler, heater and boiler, step ladder, 3 bars, 5 pipes, 2 pair reducing couplings, three-horse pole, oil tank, four-way chuck, branch connection, 3 ash cans, 4 smoke protectors, set blocks, Hale Water Tower, snow shovels, brooms, and all tools for cleaning horses and repairing engine.

ENGINE COMPANY No. 5. HOUSE MAMMOTH ROAD, PAWTUCKETVILLE.						
TWELVE MEMBERS.						
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
52....	Captain	E. W. Bartlett.....	51	Permanent	May, 1883..	Engine House
52....	Lieutenant ...	J. H. Joyce.....	56	Permanent	June, 1884..	Engine House
5....	Driver & Clerk	G. F. Flint.	37	Permanent	Aug, 1892	Engine House
51....	Engineer	C. L. Brown.....	44	Permanent	Jan., 1893..	Engine House
53....	Ass't Engineer	J. P. Fowler	52	Carpenter	May, 1883..	Mammoth Road
55....	Hoseman	A. F. Cogger.....	54	Piper	May, 1883..	White Street
50....	Driver	S. S. Page.....	50	Mason	May, 1888..	Second Avenue
58....	Hoseman	J. J. Frazier.....	42	Moulder	June, 1892..	Varnum Avenue
56....	Hoseman	R. B. Seeton	49	Brass Finisher..	Aug, 1892..	Eighth Avenue
54....	Hoseman	J. J. McMannimon..	27	Machinist	Jan., 1893..	Second Avenue
59....	Hoseman	A. H. Vinning	53	Carpenter	Mar., 1893..	Mammoth Road
57....	Hoseman	R. W. Broadbent...	31	Teamster	Mar., 1893..	Liberty Street
....	Substitute	F. B. Bartlett.....	29	.....	April, 1898..	
....	Substitute	E. F. Farrell.....	24	.....	Dec., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care Engine Company, No. 5.

Steamer built by American Fire Engine Company, Seneca Falls, N. Y.; weighs 7,350 pounds; two-horse hose wagon built by J. H. Swett, Lowell, Mass., weighs 4,300 pounds; 2,400 feet cotton hose, 50 feet rubber hose, four-way chuck, 3 hydrant wrenches, carriage jack, 6 horses, 6 harnesses, 2 clocks, 2 mirrors, table, 24 chairs, 2 dusters, 7 shovels, 4 pails, 6 spittoons, 7 beds and bedding, 26 badges, 12 set buttons, 8 insignia, 4 ash cans, 4 stable cans, 5 ladders, 6 spanners, 4 ladder straps, jack screw, 6 coal boxes, hose washer, 2 extinguishers, work bench and vise, 3 hooks, 4 pipes, 3 axes, 6 lanterns, 2 three-horse poles, 6 horse blankets, fuel wagon, 2 monkey wrenches, 4 hay hooks, 6 smoke protectors, 60 gallon oil tank, and all tools for cleaning horses and repairing engine.

TWELVE MEMBERS.			ENGINE COMPANY No. 6.		HOUSE ON FLETCHER STREET.	
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
135....	Captain	D. J. Hurley	47	Permanent	May, 1879..	Engine House
63....	Lieutenant ...	E. W. Fletcher.....	45	Moulder	June, 1874..	L. M. S. Corp.
6....	Clerk	J. A. Fletcher.....	42	Driver, wagon ..	May, 1880..	Engine House
61....	Hoseman	T. H. Rogers.....	47	Permanent	Dec., 1888..	Engine House
64....	Hoseman	E. F. Saunders.....	33	Baker	Feb., 1890..	Mt. Washington St.
65....	Hoseman	J. J. Murray.....	47	Cabinet Maker..	July, 1885..	Bowers Street
60....	Driver	S. R. Pendexter	46	Driver, Engine..	June, 1892..	Engine House
62....	Engineer	F. G. Collins	40	Permanent	Dec., 1889..	Engine House
67....	Hoseman	E. A. Walsh.....	27	Plumber	June, 1895..	Engine House
69....	Ass't Engineer	E. Perham... ..	38	Box Maker	July, 1892..	Common Street
66....	Hoseman	R. E. Burns	33	Cabinet Maker..	Dec., 1888..	Nichols Street
79....	Hoseman	T. F. Maguire.....	32	Clerk	July, 1892..	Butterfield Street
....	Substitute	T. F. Saunders.....	27	.....	Sept., 1895..	
....	Substitute	J. J. Saunders.....	26	.....	Jan., 1899..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Engine Company, No. 6.

Engine built by Manchester Locomotive Works, Manchester, N. H. ; weight when loaded, 9,300 pounds ; 36 feet suction hose, hydrant couplings, one-horse hose wagon, 4 horses, 5 harnesses, bridle, extinguisher. 1,750 feet cotton hose, 4 pipes, 2 stop nozzles, 10 spanners, 2 and 4-way chuck, 2-way connection with valves, reducer, 3 brooms, 4 hydrant wrenches, carriage jack, 3 pails, 3 stable cans, jack screw, 3 ladder straps, 5 blankets, 2 dusters, ladder, step ladder, brush, 11 lanterns, 8 spittoons, 2 shovels, 19 chairs, 7 beds and bedding, 5 mops, window brush, table, 2 dust pans, 2 axes, 1 ash can, 2 clocks, 3 mirrors, gas stove, steam boiler, 26 badges, 12 set buttons, 4 insignia, hose washer, 1 1-2 tons steamer coal, 2 benches and vises, 100 feet hose, oil tank, fork, 6 smoke protectors, and all tools for cleaning horses and repairing engine.

NINE MEMBERS.			HOSE COMPANY No. 7.		HOSE ON CENTRAL STREET.	
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
72....	Captain.....	E. Cunningham.....	51	Steam Fitter...	Aug., 1866..	82 Charles Street
70....	Lieutenant...	E. O'Connell.....	41	Driver.....	Aug., 1878..	Hose House
7....	Clerk.....	J. Sullivan.....	32	Permanent.....	July, 1892..	Hose House
73....	Hoseman....	P. Emerson.....	40	Carpenter.....	Feb., 1883..	49 Cedar Street
74....	Hoseman....	E. Crowley.....	44	Coppersmith....	Feb., 1883..	Hose House
71....	Hoseman....	P. McLaughlin.....	43	Permanent.....	Aug., 1888..	Hose House
77....	Hoseman....	J. J. Emerson.....	36	Upholsterer....	July, 1889..	3 Mead Street
75....	Hoseman....	R. Carland.....	36	Permanent.....	Oct., 1893..	Engine House
76....	Hoseman....	Peter Sheehan.....	30	Clerk.....	Dec., 1897..	11 Lyon Street
...	Substitute....	J. P. Moore.....	26	.....	Feb., 1898..	
....	Substitute....	E. F. Teague.....	24	.....	Oct., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Hose Company, No. 7.

One two-horse hose carriage with pole and shafts, hose sleigh, 2 horses, 2 blankets, set double harnesses, 2 forks, 2 brooms, 1,600 feet cotton hose, 50 feet rubber hose, 2 pipes and stop nozzles, 6 lanterns, 2 axes, four-way and two-way chuck, 2 wrenches, reducer, coupling, cap, 4 spanners, 4 ladder straps, branch connection, 2 dusters, carriage jack, 2 stable cans, 5 beds and bedding, 12 chairs, carpet, 6 spittoons, 2 clocks, 2 oil cans, extinguisher, 4 shovels, 2 pails, 2 mirrors, hose washer, pair steps, wagon, 3 bridles, table, 20 badges, 9 set buttons, 4 insignia, boiler, 6 smoke protectors, and all tools for cleaning horses.

HOSE COMPANY No. 8.			HOUSE ON MERRIMACK STREET			
NINE MEMBERS.						
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
150....	Captain	W. J. Flynn.....	46	Permanent	April, 1885..	Hose House
83....	Lieutenant ...	D. H. Crowley.....	38	Permanent	Feb., 1890..	Hose House
87....	Hoseman	W. F. Tighe.....	36	Plumber.....	Sept., 1892..	Butterfield Street
88....	Hoseman	W. F. Dana.....	34	Machinist	Oct., 1888..	64 L. M. S. Corp.
154....	Clerk	B. J. Dunn.....	36	Driver	Feb., 1890..	Hose House
85....	Hoseman	L. S. Kimball.....	48	Roll Coverer ...	May, 1869..	16 John Street
86....	Hoseman	T. F. Welch	48	Cabinet Maker..	June, 1884..	49 Common Street
136....	Hoseman	J. F. Convery... ..	45	Carpenter	Jan., 1893..	39 Adams Street
89....	Hoseman	C. Collins.....	28	Machinist	Aug., 1894..	44 Common Street
....	Substitute	T. F. Lynch	32	.....	Nov., 1895..	
....	Substitute	W. M. Barrett.....	21	.....	Aug., 1898	

SCHEDULE OF PROPERTY

Belonging to the City, in care Hose Company, No. 8.

Two-horse hose carriage, two-horse hose sleigh, 2 horses, 1 set double harnesses, 2 bridles, 2 blankets, extinguisher, 1,650 feet cotton hose, 2 pipes and shut-off nozzles, 6 spanners, four-way chuck, bar, axe, 3 ladder straps, 3 mops, 3 wrenches, 2 stable cans, 2 dust pans, carriage jack, 3 brooms, 2 ash cans, step ladder, 3 shovels, 6 cuspidores, 2 clocks, water cooler, 2 mirrors, 2 pails, 2 dusters, rubber mat, 11 chairs, 5 beds and bedding, table, 5 rugs, boiler, 20 badges, 9 set buttons, 4 insignia, window brush, scrub brush, hose washer, half-peck measure, 2 forks, 50 feet rubber hose, 4 lanterns, 5 smoke protectors, and all tools for cleaning horses.

HOSE COMPANY No. 9.			HOUSE ON LINCOLN STREET.			
NINE MEMBERS.						
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
92....	Lieutenant....	P. S. Webster	51	Permanent	May, 1884..	Hose House
93....	Clerk	G. H. Chapman	43	Driver	May, 1885..	Hose House
91....	Captain	J. Baxter.....	40	Permanent	July, 1883..	Hose House
95....	Hoseman	J. E. Wilkins.....	51	Machinist	July, 1883..	6 Main Street
96....	Hoseman	P. J. Clune	38	Machinist	Nov., 1890..	Hose House
97....	Hoseman	C. A. Rock.....	39	Butcher.....	May, 1893..	92 Washington St.
98....	Hoseman	E. F. Grady	37	Folder	May, 1893..	282 Lincoln Street
99....	Hoseman	F. A. Kappler..	40	Carpenter	May, 1893..	203 Lincoln Street
94....	Hoseman	D. F. Conroy.....	27	Clerk	Jan., 1894..	4 Carter Place
....	Substitute	J. Coleman	22	.....	Aug., 1897..	
....	Substitute	P. Hoar	23	.....	Nov., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Hose Company, No. 9.

One-horse hose wagon, sleigh, 2 horses, 2 harnesses, 2 blankets, four-way chuck, 2 wrenches, 2 pipe and stop nozzles, 5 spanners, bar, 3 ladder straps, 2 lanterns, 1,250 feet cotton hose, 25 feet rubber hose, carriage jack, 2 clocks, mirror, table, 20 chairs, stable can, duster, 3 shovels, 3 pails, 5 spittoons, 6 beds and bedding, 23 badges, 9 set buttons, 8 insignia, dust pan, brush, 2 brooms, oil can, 7 mats, extinguisher, steam boiler, hose washer, 6 smoke protectors, and all tools for cleaning horses.

HOSE COMPANY No. 10.

HOUSE ON FOURTH STREET.

NINE MEMBERS.

Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
160....	Captain.....	C. F. Hemenway...	49	Permanent	Sept., 1875..	Hose House
163....	Lieutenant ...	F. Mansur.....	49	Carpenter	Nov., 1874..	83 Fifth Street
161....	Clerk.....	A. E. Kidder.....	43	Driver	Oct., 1887..	Hose House
166....	Hoseman	D. Common.....	49	Carpenter	Mar., 1896..	Beach Street
164....	Hoseman	C. E. Abare.....	24	Laborer	Sept., 1897..	58 Fourth Street
165....	Hoseman	F. D. Morey.....	34	Carpenter	Nov., 1887..	Methuen Street
162....	Hoseman	J. McCafferty.....	35	Permanent	Nov., 1887..	Hose House
168....	Hoseman	Fred Mansur.....	40	Carpenter	Oct., 1889..	21 Third Street
167....	Hoseman	E. S. Barnes.....	29	Electrician	July., 1897..	31 Myrtle Street
....	Substitute	C. S. Hoisington ...	41	.....	Aug., 1897..	
....	Substitute	J. J. Baker.....	21	.....	Feb., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Hose Company, No. 10.

Two-horse hose carriage, 2 horses, set double harnesses, 2 bridles, 2 blankets, 1,550 feet cotton hose, 25 feet rubber hose, 2 pipes and stop nozzles, reducer, two way and four-way chuck, branch connection, reducing coupling, cap, 8 spanners, 2 wrenches, 6 lanterns 2 bars, ladder, axe, carriage-jack, stable can, 4 beds and bedding, 20 chairs, table, clock, 2 pails, 2 shovels, 3 brooms, 2 forks, duster, sifter, 4 ash cans, 2 oil cans, 3 spittoons, set blocks, 140 feet rope, pulley, hose sleigh, fuel wagon, steam boiler, pair steps, 6 smoke protectors, 9 set buttons, 20 badges, 4 insignia, hose washer and all tools for cleaning horses.

NINE MEMBERS.			HOSE COMPANY No. 11.			HOUSE ON LAWRENCE STREET.		
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.		
200....	Captain	J. J. Jennings.....	40	Permanent.	Nov., 1883..	Hose House		
201....	Lieutenant. . .	W. A. Dolan.....	35	Permanent.	Jan., 1888..	Hose House		
202....	Clerk	J. Bamford.....	40	Driver	Dec., 1889..	Hose House		
203....	Hoseman	E. Jennings.....	35	Machinist	Jan., 1893..	859 Lawrence St.		
204....	Hoseman	W. H. Meloy.....	40	Blacksmith	Dec., 1896..	358 Central Street		
205....	Hoseman	T. J. Dwyer.....	36	Machinist.....	Jan., 1893..	534 Central Street		
206....	Hoseman	George Buck.....	33	Belt Maker	Jan., 1893..	742 Lawrence St.		
207....	Hoseman	J. J. Doherty.....	36	Fruit Dealer....	Jan., 1893..	18 Mill Street		
208....	Hoseman	J. F. Welch.....	33	Piper	Jan., 1893..	417 Lawrence St.		
....	Substitute	W. J. Sullivan.....	32	. . . . .	Nov., 1896..		
....	Substitute	J. Farley.....	31	. . . . .	April, 1898..		

SCHEDULE OF PROPERTY

Belonging to the City, in care of Hose Company, No. 11.

One one-horse hose wagon, 2 horses, 2 harnesses, 2 blankets, extinguisher, 1,500 feet cotton hose, 50 feet rubber hose, 2 pipes and stop nozzles, 4 spanners, four-way chuck, bar, 3 brooms, carriage jack, 2 pails, 2 ladder straps, 2 dusters, 2 brushes, 2 lanterns, 2 pipe holders, wire basket, 1,200 feet 3-4 inch rope, 75 feet 2-inch rope, 12 spittoons, 2 shovels, 18 chairs, 5 beds and bedding, 7 ash cans, 2 clocks, 3 mirrors, steam boiler, 20 badges, 9 set buttons, 8 insignia, table, dust pan, oil tank, 7 smoke protectors, door mat, 6 rugs, water heater, hose washer, 3 mops and all tools for cleaning horses.

TRUCK COMPANY No. 1.

TEN MEMBERS.

HOUSE ON LAWRENCE STREET.

Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
209....	Captain.	A. H. Gibson.....	42	Permanent	Feb., 1884	Ladder House
210....	Lieutenant. ..	T. Brown.....	42	Permanent	May, 1890..	Ladder House
211....	Clerk	T. Dwyer	35	Permanent	Sept., 1888..	Ladder House
212....	Ladderman...	J. O'Hare	32	Driver.	Jan., 1893..	Ladder House
213....	Ladderman...	J. F. McGuinness...	36	Cloth-finisher ...	Jan., 1893..	34 Floyd Street
214....	Ladderman...	J. B. Stanton....	38	Wool-sorter	Jan., 1893..	17 Newhall Street
215....	Ladderman...	J. D. Finnegan.....	33	Clerk	Jan., 1893..	185 Lawrence St.
216....	Ladderman...	J. J. Donohoe.....	40	Teamster	Jan., 1893..	74 Agawam Street
218....	Ladderman...	Wm. Gilmore.....	40	Clerk	Jan., 1893..	49 Hudson Street
217....	Ladderman...	Wm. Heelon.....	36	Livery Stable ...	Mar., 1896..	19 So. Whipple St.
....	Substitute	C. J. Meehan	35	.....	Aug., 1894..	
....	Substitute	W. D. Draper.....	33	.....	April, 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Truck Company, No. 1.

Hook and ladder truck, Bangor ladder 65 feet long, one 37 feet, one 25 feet; 4 roof ladders, one 25 feet, one 18 feet, one 12 feet and one 15 feet extension, door opener, wrench, 2 axes, 4 forks, 2 buckets, 3 lanterns, 4 shovels, 4 bars, 3 horses, 3 harnesses, 3 blankets, 100 feet 3-8 inch rope, 18 chairs, 3 brooms, 2 wire baskets, 2 stable cans, 5 beds and bedding, 22 badges, 10 set buttons, 8 insignia, three-horse pole, 2 pails, whip, 3 mirrors, 2 clocks, 2 dusters, 3 hooks, 6 rugs, 6 smoke protectors, 4 brushes, jack-screw, 12 spittoons, table and all tools for cleaning horses.

TRUCK COMPANY No. 2, WITH CHEMICAL ENGINE ATTACHED.
THIRTEEN MEMBERS.

HOUSE ON WESTFORD STREET.

Badge.	Rank.	Name.	Age	Occupation.	Joined Dept.	Residence.
221....	Captain.....	D. W. Hilliard.....	46	Permanent	Aug., 1872..	Truck House
220....	Clerk.....	G. W. Alcott.....	45	Driver	Oct., 1877..	Truck House
130....	Driver.....	G. A. Dickey.....	49	Driv. Chemical..	Nov., 1888..	Truck House
132....	Ladderman...	H. S. Gardner.....	46	Permanent	May, 1874..	Truck House
131 ...	Ladderman...	E. E. Smith.....	44	Permanent	Jan., 1890..	Truck House
123....	Lieutenant....	C. A. Thompson....	54	Carpenter	May, 1880..	21 Kimball Avenue
125....	Ladderman...	G. E. Maynard.....	42	Carpenter	Oct., 1888..	26 East Pine Street
129....	Ladderman...	L. A. Miller	34	Electrician	Nov., 1890..	17 Lane Street
127....	Ladderman...	D. D. Libby.....	36	Carpenter	June, 1892..	Truck House
128....	Ladderman...	C. Stackpole.....	41	Clerk	Jan., 1893..	425 School Street
126....	Ladderman...	S. A. Pickering....	32	Carpenter	Nov., 1890..	34 Hastings Street
122. ...	Ladderman...	A. I. Laughton	43	Tinsmith	Oct., 1891..	8 Manahan Street
124....	Ladderman...	Q. A. Foster.....	41	Blacksmith	June, 1889..	41 D Street
....	Substitute	W. S. Holt	24	.....	April, 1898..	
....	Substitute	R. B. Joslin.....	25	.....	April, 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Truck Company, No. 2.

Hook and ladder truck, single tank Chemical Engine, Boston ladder 55 feet long, two 35-foot ladders, 5 roof ladders (two 25 feet long and two 22 feet long), two 16-foot ladders, 4 prop hooks, 6 axes, 2 adjustable hooks for roof ladders, 4 shovels, 7 lanterns, 4 forks, 2 rakes, door opener, 3 bars, 200 feet of rope, 4 pails, 3 whips, 2 carriage jacks, 25 chairs, table, 2 mirrors, 3 clocks, 2 dusters, 2 brushes, 100 feet 3-4 inch and 250 1-inch rubber hose, 4 plaster hooks, hay hook, 9 small hooks, 2 wrenches, 3 chain dogs, 3 ash cans, 3 stable cans, set blocks, 8 smoke protectors, 20 feet of 1 1-2 inch rubber hose, 6 spittoons, 4 horses, 2 sets double harnesses, single harness, 5 blankets, 5 halter bridles, three-horse hitch exercise wagon, 8 beds and bedding, 26 badges, 13 set buttons, 5 insignia, and all tools for cleaning horses.

TRUCK COMPANY No. 3, WITH CHEMICAL ENGINE ATTACHED.

THIRTEEN MEMBERS.

HOUSE ON PALMER STREET.

48

ANNUAL REPORT

Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
110....	Captain.....	F. E. Fuller.....	49	Permanent	May, 1869.	Truck House
141....	Lieutenant. .	H. F. Harris.....	46	Tinsmith	Nov., 1888..	Truck House
112....	Clerk.....	F. J. Townsend....	44	Driver.....	May, 1886..	Truck House
140....	Ladderman...	W. F. Foss.....	34	Permanent	April, 1892..	Truck House
113....	Ladderman...	W. F. Simons.....	47	Permanent	Sept., 1872..	Truck House
111....	Ladderman...	T. F. Welch.....	41	Permanent	Nov., 1887..	Truck House
142....	Driver	H. A. Merrill.....	36	Driv., Chemical.	June, 1884..	Truck House
143....	Ladderman...	W. B. Ryan.....	39	Permanent	July, 1892..	Truck House
116....	Ladderman...	W. P. Maker.....	34	Machinist	Sept., 1888..	L. M. S. Corp.
117 ..	Ladderman...	D. Leary	34	Steam Fitter....	Sept., 1892..	459 Broadway
118....	Ladderman...	H. C. Wilkins	40	Clerk	Jan., 1890..	13 Wachusett St.
114....	Ladderman...	E. Kirwin.....	49	Piper	May, 1871..	10 Cady Street
115....	Ladderman...	E. H. Dearth.....	34	Permanent.....	Jan., 1893..	Truck House
....	Substitute. ...	P. O'Loughlin	37	.....	July, 1893..	
....	Substitute.	W. B. Wilcox	38	.....	Dec., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Truck Company, No. 3.

Aerial Truck, built by Fire Extinguisher Company of Chicago; two-horse and three-horse hitches, single tank chemical engine, 5 horses, extension ladder 85 feet, one 55 feet, two 16 feet, one 35 feet, one 30 feet, two 20 feet, one 14 feet, one 24 feet, one 21 feet, one 19 feet and three 12-foot ladders, door opener, bar, 4 iron stakes, sledge, three 100-foot ropes, 2 forks, 2 shovels, 4 hay forks, 6 bale hooks, hammer, wire cutter, 4 buckets, 8 lanterns, 7 axes, 2 monkey wrenches, carriage jack, jack screw, 250 feet 1-inch rubber hose, 50 feet 1 1-2 inch cotton hose, 2 spanners, 2 1-2 kegs of soda, carboy of vitriol, 5 blankets, set of three-horse hitch and set of double harnesses, pair lead bars, 2 tables, 28 chairs, 3 clocks, 9 beds and bedding, 6 spittoons, 6 pails, 6 mops, water cooler, 10 rugs, 2 mirrors, 30 feet 3-4 inch hose, 2 dusters, 3 brushes, 6 smoke protectors, 28 badges, 13 set buttons, 8 insignia, cellar pipe, and all tools for cleaning horses.

TEN MEMBERS.			TRUCK COMPANY No. 4.		HOUSE ON FOURTH STREET.	
Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
102....	Captain	H. B. Downs	65	Permanent.	July, 1863..	Truck House
101....	Lieutenant ...	J. W. Adams	48	Permanent.	Aug., 1874..	Truck House
100....	Clerk	W. L. Peabody....	50	Permanent.	Nov., 1874..	Truck House
105....	Ladderman...	R. W. Stickney....	37	Janitor	May, 1889..	359 Hampshire St.
104....	Ladderman ...	E. Lepiene	45	Roll Coverer....	Nov., 1894..	22 Seventh Street
106....	Ladderman ...	N. Bishop	60	Lighter	July, 1855..	May Street
103....	Ladderman ...	T. McCormick	44	Lineman	May, 1886..	172 Market Street
109....	Ladderman ...	T. Conway	31	Lineman	July, 1893..	160 Andover
107....	Ladderman ...	G. E. Schofield....	32	Teamster	Dec., 1897..	371 Bridge Street
108....	Ladderman ...	W. N. Flagg	52	Carpenter	Feb., 1884..	235 Appleton St.
....	Substitute	H. Mangan	29	.....	Aug., 1897..	
....	Substitute	J. C. Kennedy	28	.....	Feb., 1898..	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Truck Company, No. 4.

Hook and ladder truck, 5 extension ladders (55, 35, 25, 20, and 10 feet respectively), 2 roof ladders (18 and 20 feet respectively), 1 single ladder 20 feet long, 4 props, 6 hooks, door opener, jimmie, 4 axes, 4 lanterns, 4 shovels, 3 horses, 3 harnesses, 3 blankets, 10 chairs, broom, 200 feet rope, 2 stable cans, 4 hay hooks, three-horse hitch, pair lead bars, 3 smoke protectors, 3 beds and bedding, 22 badges, 10 set buttons, 8 insignia, and all tools for cleaning horses

PROTECTIVE COMPANY No. 1.

HOUSE ON WARREN STREET.

FIVE MEMBERS.

Badge.	Rank.	Name.	Age.	Occupation.	Joined Dept.	Residence.
80....	Captain	J. L. Flagg.....	62	Permanent.....	Feb., 1875..	Protective House
82....	Lieutenant ...	W. H. Halstead....	53	Permanent.....	May, 1861..	Protective House
84....	.....	D. W. Russell.....	44	Permanent.....	Jan., 1885..	Protective House
81....	.....	J. W. Halstead....	49	Permanent.....	Jan., 1871..	Protective House
8....	Clerk	J. F. McKissock....	45	Driver.....	July, 1889..	Protective House

SCHEDULE OF PROPERTY

Belonging to the City, in care of Protective Company, No. 1.

One wagon, traverse runner sleigh, extra pole, two extra wheels
3 horses, 3 harnesses, 4 blankets, 2 Johnson pumps, 6 extinguishers,
Siamese connections, 100 pounds soda, 40 pounds of vitriol, 24
soda cans, 216 vitriol bottles, 16 brooms, 7 shovels, 4 squilgees,
3 iron pails, 5 large sponges, 2 axes, pick-axe, 2 bars, 2 hammers,
36 spikes, 2 augers, lathe, rake, 2 monkey-wrenches, 12
lanterns, two 10-foot folding ladders, Spencer canvass chute
and Dixon air gun, 2 dust pans, 60 gallon oil tank, 2 oil cans,
5 caps and 5 regulation badges, 8 insignia, 6 beds and bedding,
24 chairs, 3 mirrors, 2 clocks, table, 2 bureaus, carpet, water
cooler, boiler, two 10-foot length 3 1-2 inch hose, 50 feet 3-4 inch
rubber hose, 50 feet 5-8 inch rope, 104 rubber covers, 4 ash
cans, 2 stable cans, 4 mops, 3 chamois skins, 3 stable pails, 2
carriage jacks, 2 stable brooms, 2 dusters, 2 pairs of steps, 2 sets of
blocks, 5 spittoons, 2 cells Bradbury-Stone Storage Battery for
headlights, three horse pole, 2 jimmies, acid pump, 8 smoke
protectors, canvass blanket, rubber gloves, and all tools for
cleaning horses.

Location of Signal Boxes.

- 4—Dutton Street, opposite Parker and Cheney's
- 5—Corner of Cushing and Fletcher Streets
- 6—Corner of Mt. Vernon Street and Broadway
- 7—Corner of Market and Dutton Streets
- 8—Corner of Westford and School Streets
- 9—Corner of Common and Salem Streets
- 12—Market Street, Police Station
- 13—Corner of Prescott and Merrimack Street
- 14—Corner of Fayette and Andover Streets
- 15—Bleachery Street, on Bleachery Stable
- 16—Hosford Square
- 17—Corner of Middlesex and Walker Streets
- 18—Junction of Lincoln and Hale Streets
- 19—Corner of Gorham and Union Streets
- 21—Corner of Kirk and Merrimack Streets
- 23—Corner of Colburn Street and Lakeview Avenue
- 24—Corner of Middlesex and South Streets
- 25—Merrimack Street, near Tremont House
- 26—Corner of Fletcher and Pawtucket Streets
- 27—Corner of Riverside Street and Mammoth Road
- 28—Corner of Hall and Aiken Streets
- 29—Corner of Tenth and Myrtle Streets
- 31—Corner of High and East Merrimack Streets
- 32—Corner of Bridge and Tenth Streets

- 33—Corner of Walker Street and Broadway
- 34—Lincoln Street, on Tannery
- 35—Corner of Charles and Lawrence Streets
- 36—City Farm, on Pole
- 37—Corner of Whipple and Kinsman Streets
- 38—Fair Grounds, on buildings
- 39—Corner of Fletcher Street and Broadway
- 41—Corner of Wyman and Nesmith Street
- 42—Middlesex Street, Engine House
- 43—Edson School House, Highland Street
- 45—Engine House, Branch Street
- 46—Corner of First and Bridge Streets
- 47—Andover Street, near B. F. Butler's driveway
- 48—Corner of Dover and Grove Streets
- 49—Corner of Nesmith and Chestnut Streets
- 51—Junction of Thorndike and Gorham Streets
- 52—Corner of Moody and Austin Streets
- 53—Central Street, near Boston and Maine Depot
- 54—School Street, near Gas Works
- 55—Kitson Machine Shop (Private)
- 56—Middle Street, Engine House
- 57—Warren Street, opposite George Street
- 61—Lawrence Street, Engine House
- 62—Corner of Bowers and School Streets
- 63—Corner of Hale and Howard Streets
- 64—Corner of Third and Myrtle Streets
- 65—Lakeview Avenue, near Aiken Street Bridge
- 67—Hildreth Street, opposite Lilley Avenue
- 68—Corner of Sixth and Fremont Street
- 71—Middlesex Village, on Pole
- 72—Middlesex Street, opposite Huntoon's Stable
- 73—Mammoth Road, near City Line
- 74—Varnum Avenue
- 75—Moody Street, near Riverside Street

- 76—Mt. Hope Street, corner of Sixth Avenue
- 81—Corner of Pine and Wilder Streets
- 82—Corner of Chelmsford and Grand Streets
- 83—Corner of Powell and Smith Streets
- 84—Corner of Westford and Gates Streets
- 85—Corner Pine and Marlborough Streets
- 86—Corner of School and Liberty Streets
- 92—Bridge Street, opposite Whitney's
- 93—Corner Thirteenth and May Streets
- 113—Corner Paige and John Streets
- 114—Corner High and Porter Streets
- 115—Corner Moore and South Whipple Streets
- 121—Western Avenue, near Railroad Crossing
- 125—Market Street, opposite Lewis Street
- 126—Corner of Mt. Washington and Varney Streets.
- 127—Corner of Mammoth Road and Woodward Avenue
- 128—Counting Room, Tremont & Suffolk (Private)
- 129—Corner of Beacon and Methuen Streets
- 131—Corner of Howe and East Merrimack Streets
- 132—Pumping Station,
- 134—Corner of Main and Plain Streets
- 135—Perry Street, Electric Light Station
- 136—Corner of Stevens and Parker Streets
- 138—Corner of Lundberg and Gorham Streets
- 139—Corner of Cross and Adams Streets
- 141—Corner of Fairmount and Talbot Streets
- 143—Hood's Laboratory (Private)
- 145—Corner of Middlesex and School Streets
- 147—Wentworth Avenue, corner Glenwood Street
- 149—Corner of Alder and Bartlett Streets
- 152—Corner of Merrimack and Spaulding Streets
- 154—Corner of Rock and Willie Streets
- 161—Faulkner's Mill (Private)
- 162—Corner of Wilder and Pawtucket Streets

- 163—Tanner Street, near Scannell and Wholey's
- 165—Corner of Lakeview Avenue and Fred Street
- 171—Corner of Middlesex and Pawtucket Streets
- 172—Corner of Appleton and Favor Streets
- 181—Corner of Stevens and Westford Streets
- 182—Corner of Chelmsford and Westford Streets
- 183—Corner of Mason and South Loring Streets
- 184—Corner of Stevens and Marginal Streets
- 185—Corner of Pine and Westford Streets
- 192—Eighteenth Street, corner Beacon Street
- 214—Corner of Nesmith and Rogers Streets
- 215—Meadowcroft Street, near Bolt Street
- 216—Lawrence Street, near Abbott Street
- 218—Chelmsford Street, opposite Powell Street
- 225—Corner of Little and Lewis Streets
- 232—Corner of Bridge and Fifth Streets
- 234—Consumers' Brewing Company (Private)
- 235—White's Tannery (Private)
- 236—B and Puffer Streets
- 238—Corner of Gorham and Carlisle Streets
- 241—Rogers Street
- 247—Parkview Avenue, corner Hovey Street
- 249—Corner of East Merrimack and Stackpole Streets
- 261—Bunting Company (Private)
- 271—Lowell and Suburban Street Railway
- 281—Princeton Street, opposite Harvard Street
- 283—Corner of Chelmsford and Forest Streets
- 325—Fenwick Street, near Suffolk Street
- 371—Corner of Middlesex and Wood streets

FIRE-ALARM TELEGRAPH.

Location—Engine House, Palmer Street.

HENRY C. FERNALD, Operator.

Ten-circuit Automatic Repeater with Storage Battery of 400 cups	
Miles of Wire.....	100
Signal Boxes.....	112
Engineers' Gongs.....	8
Engineers' House Gongs.....	15
Indicators.....	17
Bell Strikers.....	10
Gong and Indicator Combined in Police Station.	
Gong in Pumping Station.	
Gong in Merrimack Square.	
Gong at Towers' Corner.	
Gong at Northern Depot.	

The strikers are located as follows: Palmer Street Engine House, Varnum School House, High Street Church, Court House, No. 1 Engine House, Franklin School House, Pawtucketville Engine House, No. 6 Engine House, Highland School House, Lawrence Street Engine House.

TELEPHONE CIRCUIT.

Complete Stations.....	19
Tap Bells (extra).....	22
Miles of Wire.....	40
Storage Battery of 100 cups.	

SCHEDULE OF PROPERTY

Belonging to the City, in care of Fire Alarm Operator.

One eleven circuit switch board for storage battery, one ten-circuit non-interfering automatic repeater, cut out testing switch-board, line testing machine, 12 galvanometers, 113 public and 8 private signal boxes, 16 electrical arrangements for opening stall doors, 100 miles of wire, 500 cups of storage battery, 18 call and 45 tap bells, 21 extension bells, 40 miles of wire, 23 electric light current protectors, 75 glass insulators, 2 saws, 2 hammers, 2 screw drivers, 2 straps with vises, pliers, tongs, set bits and bit stock, broad axe, pair of climbers, deadman, ladder, draw shave, fire-alarm box keys, outside shells, doors to boxes, pocket relay, lanterns, desk, table, chairs, duster, chamois skin, 36 electric gas burners, 38 cups of battery for lighting gas burners, horse, harness, blanket, sleigh, 3 wagons, etc.

SCHEDULE OF PROPERTY

Belonging to the City, in the Palmer Street Engine House.

Two horses, harness, wagons, sleighs, etc., for the Chief's use, one-horse hose carriage, 1000 feet cotton hose, 2 two-way chucks, 2 lathes, grindstone, planer, 2 stable cans, tools, poles, shafts, ladders, feed, salt, boilers, and siphon.

In Chief's office—Two desks, set of drawers, table, 16 chairs, 1 silver and two brass trumpets, mirror, cloth, badges, 3 set dies for department buttons, set of dies for department badge, large clock (Lawrence patent), small stop clock, chamois skins, dusters, soap, brooms, brushes, lanterns, medicines, sponges, matches, axle grease, etc.

The value of the foregoing property is \$154,000.00.

General Running Orders.

The companies will respond to alarms of fire given from boxes as indicated on the running card.

The Chief and Protective Company will answer alarms from all boxes.

Members of companies, who do not respond to first alarms will report to their respective houses and await orders. Should a second or third alarm be not received within thirty minutes, the officer in command will have the roll called and dismiss his men. If the recall is sounded before the stipulated time, the officer will dismiss his men. After a second alarm has been given, the members of companies not responding to it will remain on duty at their respective houses until the recall is sounded. If there are no companies remaining in quarters that respond to alarms given from other boxes after the first alarm has been given and before the recall is struck, one engine, one truck, chemical, and two hose companies, remaining in quarters nearest to the box giving the alarm will respond immediately. This article applies to all alarms of fire except in case of telephone or still alarms, the engine will not respond. After a second alarm is given, all companies remaining in quarters will respond immediately before the recall is sounded.

In cases where two alarms are given from the different boxes, the second having struck before the recall from the first box, the recall from the first box will be two blows, from the second box one blow.

The all-out or recall signal will be given by striking two blows, with an interval of ten seconds between the blows.

Second alarms will be given by striking two blows, followed by one round of the box.

Third or general alarms will be given by striking three blows, followed immediately by one round of the box, when all the companies will respond.

Second or third alarms will be given by special orders of the Chief or Acting Chief.

Two strokes repeated at 1-4 before 8 A. M. and 1-4 past 1 P. M. in the summer and 1-4 before 1 P. M. in the winter denotes no session of the Primary and Kindergarten Schools. The same alarm repeated in thirty seconds denotes no session of all the schools. The same alarm at 6.05 P. M. denotes no session of the Evening Schools.

Companies Responding to Telephone Alarms.

ENGINE COMPANY NO. 1—Lawrence Street from City line to Concord River, to but not including Watson, Newhall, Crosby and Cedar Streets, to South Highland, Hale and Lincoln Streets, to Hale's Brook, to City line, to point of beginning.

ENGINE COMPANY NO. 2—Hale's Brook from City line to but not including Lincoln, Hale, South Highland, Gorham and South Streets to Pawtucket Canal, to Fletcher and Broadway Streets, to Merrimack River, to City line, to point of beginning, also Hamilton Mills.

ENGINE COMPANY NO. 3—Suffolk Street from Merrimack River to Fletcher Street, to B. & L. R. R., to but not including Summer and Charles Streets, to Concord River, to Andover Street, to City line, to Bridge, Richardson, Hildreth, West Streets and Lakeview Avenue, to Merrimack River, to point of beginning.

ENGINE COMPANY NO. 4—Belvidere except Lawrence Street.

ENGINE COMPANY NO. 5—City line at Middlesex Village to Westford, Walker, Broadway and School Streets, to Merrimack River and Pawtucketville.

ENGINE COMPANY NO. 6—From Merrimack River to but not including Suffolk, Fletcher, Thorndike, Westford, Walker and Broadway (west of School), to Merrimack River, to point of beginning.

HOSE COMPANY NO. 7—From Pawtucket Canal opposite Hamilton Street to South and Appleton Streets, to B. & L. R. R., to Robinson, Congress, Gorham, Keene, Cedar, Crosby, Newhall and Watson Streets, to Concord River, to City line (except Lawrence Street), to but not including Andover Street, to Concord River, to Pawtucket Canal, to point of beginning, also Appleton Mills.

HOSE COMPANY NO. 8—Dutton Street from Merrimack River to but including Fletcher, Broadway and School Streets, to Merrimack River, to Dracut and City line, to but not including Bridge, Richardson, Hildreth, West Streets and Lakeview Avenue, Merrimack River to point of beginning, also Pawtucketville.

HOSE COMPANY NO. 9—B. & L. R. R., at City Line, to Westford Street, but not beyond Walker Street, on Westford, to City Line, to point of beginning.

HOSE COMPANY NO. 10—East of Dutton Street from Merrimack River, to Pawtucket Canal, to Concord River, to Merrimack River, and Centralville.

HOSE COMPANY NO. 11—Lawrence Street, from City Line, to Concord River, to but not including Charles and Summer Streets, to South and Gorham Streets, to but not including Congress, Robinson Streets, to B. & L. R. R., to City Line, to point of beginning.

TRUCK NO. 1—Lawrence Street, from City Line to Concord River, to Rogers, Wamesit, Elm, Highland Streets, to

B. & L. R. R., to Gorham, Carlisle Streets, to City Line, to point of beginning, and Belvidere.

TRUCK No. 2—City Line, to but not including Carlisle and Gorham Streets, to B. & L. R. R., to Willie and Fletcher Streets, to Merrimack River, to City Line at Middlesex Village, to point of beginning.

TRUCK No. 3—Concord River, from Merrimack River, to but not including Rogers, Wamesit, Elm, and Highland Streets, to B. & L. R. R., to but not including Willie and Fletcher Streets, to Merrimack River, to point of beginning.

TRUCK No. 4—Centralville.

CHEMICAL C—West side of B. & L. R. R., at City line, to Willie and Fletcher Streets, to Merrimack River, to City line at Middlesex Village, to point of beginning, and Pawtucketville.

CHEMICAL B—East side of B. & L. R. R., to but not including Willie and Fletcher Streets, to Merrimack River, Centralville and Belvidere.

THE PROTECTIVE COMPANY will respond to all alarms.



ANNUAL REPORT
OF THE
SUPERINTENDENT OF STREET LIGHTS
OF THE
CITY OF LOWELL
FOR THE YEAR 1898.



LOWELL, MASS.:
LOWELL SUN PRINT: SUN BUILDING,
1899.

REPORT.

LOWELL, January 1, 1899.

To the Mayor and Board of Aldermen:

GENTLEMEN,—Herein is submitted the Annual Report of the Superintendent of Street Lights, for the year ending December 31, 1897. The working force of the department under the direction of the Superintendent (Chief of the Fire Department), consists of thirteen men, one of whom acts as foreman. They have, in addition to their regular duties of lighting and cleaning the gas lamps, set up and fitted 6 gas posts, have removed 4 gas and 1 gasoline post, on account of the electric lights. They have replaced 2 gas and 38 gasoline posts that have been broken, replaced 4 lantern frames, removed 9 gas posts and plugged the mains, set 599 lights of glass and 40 globes.

There are at present 880 gas lamps; in addition there are 39 lights owned by different cor-

porations, the city paying for the gas consumed. These lights are lighted and put out according to the time designated by a card issued by the Superintendent monthly. These lights average about seven hours per night, and burn 4, 6, 12, and 18 feet per hour, according to location. There have been 6 new gas lights added and 4 discontinued during the past year.

The locations of the gas lights added are as follows: Burt street, 4; Saunders, 2.

A new contract was made with the Globe Gas Light Co., of Boston, for three years from April 1, 1898. The following is a copy of said contract:—

This agreement, made and entered into this first day of April, A. D., 1898, by and between the City of Lowell, a municipal corporation in the County of Middlesex and Commonwealth of Massachusetts, party of the first part, and the Globe Gas Light Co., of Boston, a corporation created under and pursuant to the laws of said Commonwealth, party of the second part,—witnesseth,

That the said party of the second part for and in consideration of the covenants, articles, and agreements hereinafter mentioned on the part of the said party of the first part and its successors, to be observed and kept, covenants and agrees to and with the party of the first part, to provide

and furnish for use in the said City of Lowell for lighting the streets of said City, such number of lanterns, not less than four hundred in number, furnished with said Globe Gas Light Co.'s improved fixtures on street lanterns, as shall be called for by the Mayor or Superintendent of Street Lighting of said City, to place the same on such posts as shall be designated and provided therefor by or under the authority of said City or any of its duly authorized agents or officers, to furnish all material used in lighting said streets by means of said lanterns, to furnish men to light and keep said lanterns clean, to cause all such lanterns to be and remain lighted on all dark nights from dusk until 1 o'clock A. M., and on such other nights and for such greater number of hours per night as the Mayor of said City or Superintendent of Street Lighting shall require and in writing request, for a period of three years from and after the first day of April, 1898, and thereafter, until this contract shall be terminated by a thirty days' notice in writing given by said party of the first part, its Mayor or Superintendent of Street Lighting, or by a thirty days' notice in writing given by the party of the second part.

And the said party of the first part hereby covenants and agrees to furnish and put in place suitable posts on which to place said lanterns and

maintain the same and to pay to said party of the second part five (5) cents per night per lantern during which said lanterns or any of them have been continuously lighted from dusk until 1 o'clock, A. M., and at the same rate for such greater number of hours per night as such lights have been required and used under this agreement, and to pay on the tenth day of each calendar month all bills for lighting under this agreement which have occurred during the month preceding.

To the faithful performance of all and singular the terms of this agreement the parties hereto hereby bind themselves, their successors and assigns.

In witness whereof, the said City of Lowell has caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by Edward S. Hosmer, its Superintendent of Street Lighting, and approved by James W. Bennett, its Mayor, and the said Globe Gas Light Co. has caused its corporate seal to be hereby affixed and these presents to be signed in its name and behalf by its Treasurer or Agent thereto duly authorized, this day and year first above written.

THE CITY OF LOWELL,

By J. W. BENNETT, Mayor.

EDWARD S. HOSMER, Supt. of Street Lighting.

THE GLOBE GAS LIGHT CO.,

By ARTHUR SIBLEY, Agent.

These lights as a rule are located on streets where there are no gas mains. At present there are 554, one having been replaced by an electric light, no additions were made on account of the small appropriation.

The contract with the Lowell Electric Light Corporation expired last August. A new contract was made for five years at two cents per light less than the last contract.

This agreement, made and entered into this first day of August, A. D., 1898, by and between the City of Lowell, a municipal corporation in the Commonwealth of Massachusetts, and the Lowell Electric Light Corporation, duly established by law and doing business in said City of Lowell.

Witnesseth, That the said Lowell Electric Light Corporation, in consideration of the agreements and promises of said city hereinafter contained, and of other valuable considerations by it received from said City, hereby covenants and agrees with the City that it will furnish for a period of five years from the first day of August, A. D. 1898, 460 electric arc lamps as are now located in said City, also all the arc lamps situated in Huntington and Jackson Halls, in said City, and as many more arc lamps, both in said City and halls, as the Superintendent, or any officer, agent or servant of said City having proper authority to act in the premises shall order such additional

arc lamps to be located in said City at such points and places as may be designated, in such order and as the Mayor and Board of Aldermen approve, that during such period it shall furnish all poles, wires, apparatus and fixtures required for said lamps, and such additional lamps if any, and provide and maintain said lamps, repair, paint and maintain the lamp poles and all supporting poles, hoods and supports for the lamps, and operate, clean and care for said lamps in all respects in strict conformity with the following conditions, which are made a part of this agreement, and to be observed and performed by the said Lowell Electric Light Corporation.

CONDITIONS.

The said lamp or lamps shall be what is commonly known as a two-thousand-candle-power light, of such candle power as will be obtained when each and every lamp in all the circuits in the service of said city shall give from nine and six-tenths to ten amperes or electrical units, from forty-five to fifty volts of electrical pressure; but at no time shall the electrical power of each lamp be less than four hundred and fifty watts; and it is understood and agreed that in case the "World's Electrical Congress" should at any time during the continuance of this contract adopt as the standard for arc lights a number of watts greater than that

specified, then the said corporation shall immediately furnish the number of amperes, or electrical units, and increase the electrical pressure in each lamp in the service of the city, to the number of volts necessary to produce the number of watts adopted as the standard for arc lights by the Electrical Congress aforesaid.

Each and every arc lamp furnished under this contract shall be supplied by said corporation with carbons of the best quality and of the size best adapted to give the highest candle power, with globes of clear glass free from spots or rings, said globes to be kept clean and whole, free from dust and dirt, and said lamps to give a clear, steady, white light without undue flickering or hissing.

The lamps shall be operated continuously each and every night during the continuance of this agreement, and shall be started thirty minutes after sunset and kept in operation until thirty minutes before sunrise; in case of unusual darkness due to storm or otherwise, said lamps shall be started at sunset and kept in operation until sunrise, and the time of sunset or sunrise for the purposes of this contract shall be determined by the Old Farmer's Almanac; globes that may become broken shall be replaced by new ones within a reasonable time. If the Superintendent of Street Lamps of said City shall request any of the globes changed, such change shall be made at once, and the

positions, manners of hanging, height above pavements shall be determined by said Superintendent of Street Lamps, and all lamps, wires and other conductors shall be thoroughly insulated and so placed as not to expose the public or property to danger, or to unnecessarily interfere with the work of the Fire Department in case of fire.

In case the Superintendent of Streets shall determine that any of the lamp posts, supporting posts or apparatus connected therewith, require repairing, owing to an unsightly or dangerous condition, the same shall be repaired at once or within twenty-four hours after notice from the Superintendent; and if not so repaired, said Superintendent may make the repairs, and the expense thereof shall be deducted from any amount due hereunder.

And the said Lowell Electric Light Corporation further agrees to indemnify and save harmless the said City from any and all loss, cost or damage that it may suffer by reason of any infringement suits, or by reason of any infringement of any patent right, in the use of said lamps and lights or the apparatus, fixtures, machinery, or methods connected or used in connection therewith, and from all claims, liability, or demands, that shall be caused by the erection, maintenance or use of said lamps, or the poles, wires, or appurtenances connected therewith, or from any defect therein or by the carelessness of said corporation, its agents or

servants, in the operation or management of said lamps; if the said City shall relocate any of the poles or lamps, the expense of the labor shall be paid by said City, but not of the materials and other expenses in making such change.

And the said City of Lowell upon its part covenants and agrees to pay said Lowell Electric Light Corporation, in the event that said Corporation furnishes according to the terms of this agreement the number of lights herein before mentioned, and such number in excess thereof as may be furnished by said Corporation under this agreement at the rate of thirty-three cents per light, for and during the five years of this agreement, for every whole night that the lamps are lighted, and to make payment on the tenth day of each and every month of the sum due for the calendar month next preceding; and it is understood and agreed that if any of the lights fail to burn for any of the time they should be lighted, a pro rata allowance shall be made for such time as shall be reported by the police or Superintendent of Lighting as not burning, such sums to be deducted from the amount due the said Corporation.

It is further agreed that the said Committee on Lighting of the Board of Aldermen, or the Superintendent of Street Lamps, is hereby authorized to make such tests to determine the electrical power of the lamps furnished under this agreement, as

they or he may deem necessary, and it is further understood and agreed that should any two consecutive tests made by such Committee or Superintendent in any one month, show a less number of volts, amperes or watts in any circuit in the service of said city, than is herein provided, the said city may deduct such a sum from the amount due to said corporation for the lights in such circuit for the month in which the said deficiency is found, as shall be proportionate to the shortage in the volts, amperes or watts found by the said tests when compared with the standard volts, amperes or watts herein provided.

In witness whereof the City of Lowell has caused its corporate seal to be hereto affixed and these presents to be signed in its name and behalf by Edward S. Hosmer its Superintendent of Street Lamps and approved by James W. Bennett its Mayor and the said Lowell Electric Light Corporation has caused its corporate seal to be hereto affixed and these presents to be signed in its name behalf by William H. Bent its Treasurer the day and year first above written :

CITY OF LOWELL,

By EDWARD S. HOSMER, Superintendent of Lighting.
THE LOWELL ELECTRIC LIGHT CORP.

By WILLIAM H. BENT, Treasurer.

Approved,

J. W. BENNETT, Mayor.

At present there are 460 electric lights. At the last meeting of the Board of Aldermen for 1897 six lights were ordered, the appropriation being so small no additions were made the past year, until the last meeting in December when the Board of Aldermen passed a resolution granting petitions for 9 electric, 18 gas, and 9 gasoline lights.

The following statement will show the Receipts and Expenditures for the year 1897.

RECEIPTS.

Appropriation.....	\$86,577 73
Transfer.....	1,500 00
	<hr/>
	\$88,077 73
	<hr/>

EXPENDITURES.

Pay Roll.....	\$ 8,827 86	
	<hr/>	\$8,827 86
Lowell Electric Light Company :		
Streets	\$59,108 97	
City Hall.....	1,021 92	
Memorial Hall.....	134 76	
	<hr/>	60,265 65
Lowell Gas Light Company :		
Streets	\$7,090 00	
City Hall.....	345 20	
Boiler Room.....	12 60	
Ward Rooms.....	26 30	
Department Headquarters.....	1 10	
Memorial Hall.....	2 20	
	<hr/>	7,477 40
Amouut carried forward.....		\$76,570 91

Amount brought forward.....	\$76,570 91
Globe Gas Light Company.....	10,522 38
Hay, grain, glass, paint, waste, posts, frames, lanterns, water, etc.....	875 11
Total expenditure for the year 1898.....	\$87,968 40
Transferred to General Treasury Fund... .	109 33
	<u>\$88,077 73</u>

Schedule of property belonging to the City under the charge of the Superintendent of Street Lights, Dec. 31, 1898: 1216 iron lamp posts, 550 wooden posts and frames used for gasoline purposes, 1400 lantern frames, 1 horse, 2 wagons, 2 sleighs, 2 robes, 2 blankets, 2 harnesses, collar and hames, 905 lanterns, 8 jumbos, 14 ladders, 256 globes, 62 feet 3-4-inch pipe, 40 feet 1-inch pipe, air pump, saw, 5 oil cans, 60-gallon oil tank, stove with boiler connection, match box, Colcord desk, spittoon, coal hod, 8 shovels, 100 lbs. straw, 1 gallon of turpentine, 4 paint brushes, 2 gross burners, 1 bit-stock, 2 bits, 3 drills, 1 Stilson wrench, 905 burner pipe tips, 1 canopy top, tools for cleaning horse, 10 bushels of oats, 1 stall scraper, 1 broom, 2 tool boxes, 1 table, 2 pails, 1-2 gross of matches, 3 hammers, 1 wagon-jack, 1 screw-driver, 5 picks, 4 bars, 2 tamps, 3 monkey-wrenches, 4 boxes of glass, 40 feet of hose, 1-8, 1-2 and 3 4-inch dies, 3 pipe cutters and neces-

sary pipe fittings, 4 pairs 3-4-inch tongs, diamond glass-cutter, 1-2 ton of coal, 1 lantern, spirit level, 14 torches, bench, vise, 3 chairs, 10 gallons of alcohol, 2 forks, 3 dozen pipe fittings, axe, hatchet, 3-4 ton of hay, 2 gallons of paint, looking-glass, draw-shave, etc.

Respectfully submitted, .

EDWARD S. HOSMER,
Superintendent.

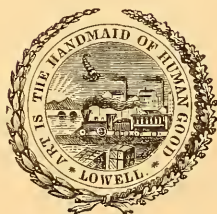
ANNUAL REPORT

OF THE

BOARD OF POLICE,

FOR THE

YEAR ENDING JUNE, 1899.



LOWELL, MASS.:
COURIER-CITIZEN PRINT.
1899.

ANNUAL REPORT.

OFFICE OF THE BOARD OF POLICE,
LOWELL, MASS. June 1, 1899.

Hon. Jeremiah Crowley, Mayor of Lowell, Mass.:

DEAR SIR:—

The Board of Police has the honor to submit herewith a report of its administration for the year ending May 31, 1899.

In the month of July last the Board, in response to numerous complaints, sent a letter to the Mayor advising him of the dangerous condition of the Pawtucketville Boulevard and suggesting that the matter be brought to the attention of the City Government with a view of securing the formulation and legislation of a city ordinance embodying such regulations as would enable the police to conserve the peace and safety of those using the thoroughfare. The Board desires again to call the attention of the Mayor and City Council to this matter, and to add that the condition of affairs prevailing on the Princeton Street Boulevard is, if anything, more dangerous; and that

the necessity for legislation of a special character for these two thoroughfares is more urgent than ever.

These boulevards are portions of our park system and are designed and maintained for the pleasure and health of the inhabitants of this city. They are frequented largely by bicycle riders and persons driving in vehicles with their families; but the two classes seem to view each other as natural enemies and to have little respect for the rights and privileges one of the other. Recklessness seems to be the rule of the road and accidents are increasing with alarming frequency. The Board would respectfully suggest that rules for riding and driving in these boulevards be adopted, with a penalty for violations; that paths be reserved for the use of bicycle riders, to which they must confine themselves and from which vehicles shall be excluded; and that heavy teams be excluded altogether from the boulevards, as experience has demonstrated that they are a serious injury and expense to the maintenance of the roads. There is nothing novel or unusual in the exclusion of heavy traffic wagons from roads of this character; it is the rule in nearly every city maintaining a park system, a rule supported by popular, public opinion.

Until some ordinance is passed covering this question it will be a matter of much difficulty for the police department to maintain that peace, safety, and comfort which the people of Lowell expect and

are entitled to on these thoroughfares; and the Board asks the serious consideration of the matter by your Honor.

During the official year four men were selected from the civil service eligible lists and appointed on the probationary reserve force; five men, having served the probationary term satisfactorily, were promoted to the permanent reserve; and one officer was promoted from the permanent reserve to the regular force. Three members of the force were before the Board charged with various infractions of discipline; two were found guilty and punished by fines; one was restored to duty, the charges against him not being sustained.

Under a separate head, appended hereto, "The Roll of Honor" gives the names of those officers whose performance of duty merited public commendation in General Orders.

The regulation of the liquor traffic throughout the year has been on the whole satisfactory. There were forty-two (42) cases of violations of the liquor laws during the year; and of these but nine occurred in licensed premises. One hotel licensee was deprived of his licenses for violation of law; five were prosecuted for Sunday sales of liquor and convicted, appeals being made; and three hotel keepers were brought before the Board and their cases carefully investigated. In these latter cases the Board hesitated to deprive the

licensees of a valuable privilege for an offence of which they were only technically guilty, the violations of law having been committed by their servants during their absence. The actual violators were prosecuted; and the Board issued a notice to all classes of licensees warning them that in the future they would be held accountable for all violations of law upon their premises, whether by them or their employes or servants.

One first class innholder's license, one fourth class retail dealer's license, five sixth class druggist's licenses, and four special licenses to sell pure alcohol were issued; and one innholder's, one retail dealer's, and one druggist's license were revoked.

The people of Lowell at the annual municipal election of 1898 voted that the sale of intoxicating liquors should not be granted in this city. Whatever may be the personal views of this Board of the wisdom or unwisdom of this decision, one course only was open to it—to do its duty firmly, strictly, and impartially, and to endeavor to carry into effect the verdict of the people. The laws governing and regulating the sale and prohibition of liquors are numerous, conflicting, vexatious, and difficult for laymen to interpret. The City Solicitor, for reasons good and sufficient to him and to the Board, having declined to give opinions on interpretations of various phases of the law, the Board sought and obtained the needed information in other quarters. The law prohibits the

sales, and the solicitation of sales, of liquors in Lowell; but it permits the importation of liquors into the city under certain restrictions and regulations. Moreover, alcohol for medicinal, manufacturing and chemical purposes, so-called native wines, cider, and intoxicating liquors in the original packages of importation, are permitted by the law to be sold freely; and these exceptions to prohibition open many doors to evasions of the law. The Board has no criticisms of the laws to make; it is its duty to carry them into effect, not to cavil at them; it wishes merely to call attention to conditions which render the enforcement of the will of the voters difficult and sometimes futile. In the enforcement of a law that has few elements of popularity this Board does not expect or receive a superabundance of public sympathy or support; nevertheless, it has sought to do its duty to the best of its ability and will continue to do so to the end of the chapter.

With a view of limiting the number of places that could, under the law, become centers of a liquor traffic, however limited, and to steer clear of some of the difficulties the police encountered in a previous no-license year, the Board deemed it wise to refuse licenses to Lowell druggists. This action doubtless entails some hardship on the people of Lowell, but it is a hardship which can be remedied by the people at the polls, or through their representatives in the General Court.

Certain newspapers in this city were found to be carrying the advertisements of out-of-town liquor dealers in their columns and the Board was advised that this action was a violation of Chapter 271 of the Acts of 1897, and a matter that it was the duty of the Board to stop. Notices were sent to all the newspapers advising them that this class of business was a violation of law and requesting that it be discontinued. Some of the newspapers suspended the publication of these liquor advertisements; the others continued them, believing, as they said, that the law never contemplated making a newspaper advertisement a solicitation; they resented the action of the Board as an infringement on their rights, and were disposed to impugn the motives of its action.

The Board neither makes nor interprets the law; it cannot ignore complaints of violations of law brought to its official notice; and, as its notification was treated with scant respect and the illegal business was continued, prosecutions were initiated and the cases are now in the courts. Experience has shown that where certain laws lack the element that brings it public support their enforcement leads to their repeal.

The regular liquor inspectors of the department have been reinforced by five men from the patrol force, who are on duty day and evening at the railroad stations, freight houses, and express offices, watching the reception of parcels of liquors brought to the city and seeing that this is done in accordance

with the laws regulating such traffic. The members of this liquor squad are also required to circulate freely through the city for the purpose of observing and detecting violations of the law, if any; and the regular patrolmen are held to a strict accountability for the condition of affairs upon their several routes and are required to report at once any transaction of a suspicious character coming within their observation.

It is worthy of note that of the 3924 arrests made during the year, 912, or about 23 per cent., were non-residents of Lowell. It is not generally understood that Lowell is the center of a district with over 100,000 inhabitants, and this city is credited by the unthinking with all the offenders against law who appear in our local police court.

The discipline and morale of the police force at present are excellent, prompt punishment for violation of the rules and regulations and equally prompt commendation for duty well done producing the best results. The Board is convinced that the force was never in a more satisfactory condition, nor has it done its work more efficiently and effectively at any period in its history.

Respectfully submitted,

JOHN A. FAULKNER,

HARRY R. RICE,

PETER J. BRADY,

Board of Police.

ANNUAL STATISTICAL REPORT

1898-99

OF THE

LOWELL POLICE BOARD.

RECORD OF ARRESTS 1898-9.

OFFENCES AGAINST PUBLIC ORDER.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Total.
Adultery	1	...	2	2	2	5	...	...	2	3	4	2	23
Bastardy .....	...	...	1	...	...	2	...	5	...	...	...	3	11
Carrying Weapons	1	...	...	...	1	...	1	...	...	...	...	...	3
Violating City Ordinances .....	...	3	2	...	1	...	...	5	...	...	1	...	12
Common Brawler .....	...	...	...	1	...	...	...	...	...	...	...	...	1
Common Night Walker .....	...	...	...	...	...	...	...	...	...	1	...	...	1
Counterfeiting .....	...	...	...	1	...	...	...	...	...	...	...	...	1
Cruelty to Animals .....	...	1	1	1	1	...	3	...	...	2	...	1	10
Disturbing Peace .....	...	5	8	4	8	1	...	...	...	3	2	3	34
Dog, Unlicensed	1	...	...	...	...	...	...	...	...	...	...	...	1
Drunkenness	279	300	287	290	337	215	222	190	170	219	248	115	2,872
Escape from Prison	2	3	1	1	2	2	...	...	1	1	2	...	15
Forgery .....	...	...	...	...	...	...	...	1	...	...	...	...	1
Fornication	1	4	4	2	4	7	...	6	1	...	...	...	29
Idle and Disorderly	1	...	1	...	...	2	1	...	13	...	...	2	20
Indecent Exposure .....	...	...	...	...	1	1	...	...	...	...	1	...	3
Lewd Cohabitation .....	...	2	...	2	...	1	...	6	...	2	...	...	13
Liquor Laws, Violating .....	...	2	2	...	2	4	2	3	2	12	5	8	42
Neglect of Family	6	5	7	5	3	4	5	2	3	1	...	4	45
Peddling, Unlicensed	1	5	8	1	...	2	1	...	...	...	...	...	18
Polygamy .....	...	...	...	...	...	...	...	...	1	...	...	...	1
Profanity .....	...	...	...	1	1	...	...	...	...	...	...	...	2
Refusing to Aid Officer .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Stubbornness .....	...	...	3	2	2	2	...	1	2	1	3	1	17
Vagabonds .....	...	...	...	...	...	...	...	...	1	1	...	...	2
Vagrants .....	...	1	2	...	1	1	...	...	...	2	...	...	7
Truancy	3	...	...	...	3	5	3	2	4	1	8	3	32
Insanity	6	3	4	3	1	...	4	...	...	3	3	5	32
Suspicious Persons	12	20	18	20	8	12	4	6	14	21	13	12	160
Capias from Courts	6	1	...	...	...	2	1	2	4	2	...	1	19
Safe Keeping	1	1	1	...	2	3	...	...	...	3	...	1	12
Mendicancy .....	...	1	...	...	...	...	1	...	...	...	...	...	2
Gambling .....	...	...	7	4	4	...	5	...	4	6	1	...	31
False Answers .....	...	...	2	...	...	...	...	...	...	...	...	...	2
Violating Game Laws .....	...	...	...	...	1	...	...	...	...	...	...	1	2
Violating Election Laws. ....	...	...	...	...	...	...	1	...	...	...	...	...	4
Violat'g Food & Health Laws. ....	...	...	...	...	...	...	...	...	4	...	...	...	1
Desertion U. S. Service .....	...	...	...	...	...	3	...	...	...	1	...	...	1
Giving Liquor to Prisoner .....	...	...	...	...	...	...	...	1	...	...	...	...	1
Impersonating Officer .....	...	...	...	...	...	...	...	...	1	...	...	...	4
Totals	321	358	361	340	385	274	254	223	216	303	291	195	3,521

RECORD OF ARRESTS 1898-9.—Continued.

OFFENCES AGAINST THE PERSON.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Totals.
Assault	18	14	17	10	14	5	6	7	6	15	10	8	130
Assault, Felonious				1			2	1		1			5
Manslaughter									1				1
Rape	1	1			1					1	1		5
Rape, Attempt			1										1
Robbery					2	2							2
Threats	1	1	4	3	2	2	3	2		2	2		23
Totals	20	16	22	14	19	8	11	10	7	19	13	8	167
OFFENCES AGAINST PROPERTY.													
Arson		1											1
Breaking and Entering	2	3	5	8	7	7	6	13	1	1	3	2	58
Embezzlement	1	2	2	2			1	2	4	2	1	2	20
Evading Fare		1	1	1		1	1						5
Fraud		1				1							2
Larceny	17	16	13	29	15	8	13	20	11	14	17	10	183
Malicious Mischief	1	1		2				1					7
Receiving Stolen Goods				1			1					1	3
Trespass			3	3	1								7
Unlawful Taking			1										1
Concealing Mort'ged Prop	1		1	1				1		1			5
Illegally Remov'g Baggage	1	1		2	1	1		2	1		2		11
Injury to Real Estate		1			1	1	2	1		1	3		10
False Pretences		1	2	1			1	1		1	1	1	9
Suspicion of Larceny		8	3	1	3	3	2	2	1	2	2	3	30
Selling Mort'ged Property					1	1			1				3
Suspicion of B. and E.										1			1
Totals	23	36	31	50	29	23	27	42	20	30	29	19	359

DISTRIBUTION OF ARRESTS—1898-9.

According to Sex, Nationality and Occupation.

SEX AND NATIONALITY.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Total.
Men.....	274	290	301	290	326	227	217	201	186	267	232	149	2,960
Women	51	72	63	65	58	43	40	35	39	48	68	24	606
Minors.....	29	36	42	33	36	23	22	39	16	32	28	22	358
Non-residents.....	88	100	100	91	96	69	63	57	57	83	68	40	912
United States.....	161	181	186	151	194	149	131	136	118	169	164	84	1,824
Ireland.....	91	105	82	114	97	62	65	48	45	78	77	30	894
England.....	49	35	36	28	34	22	27	25	18	22	36	21	353
Scotland.....	4	2	7	11	6	8	4	6	7	12	3	2	72
British America	37	56	64	68	65	38	35	46	41	50	35	48	583
France	1	2	1	....	1	....	3	1	....	....	....	....	12
Germany.....	1	2	2	2	....	3	1	2	....	1	....	1	15
Italy and Portugal.....	....	....	....	....	3	....	....	....	2	....	1	....	6
Russia and Greece.....	4	7	11	10	14	2	8	8	4	8	6	6	88
Turkish Empire.....	1	2	9	1	4	7	....	....	1	4	2	....	31
Scandinavia	4	5	5	3	2	2	5	1	4	2	2	1	36
Miscellaneous.....	1	1	3	....	....	....	....	2	....	1	....	1	9
Totals.....	354	398	406	388	420	293	279	275	241	347	328	195	3,924
OCCUPATIONS.													
Trades, Building.....	37	31	28	40	35	24	22	14	12	33	28	14	318
“ Mechanic.....	31	33	24	28	31	15	37	27	31	23	27	18	325
Mill and Factory.....	132	119	150	134	154	91	86	98	76	130	118	71	1,359
Shops and Stores.....	15	14	28	14	19	12	7	13	18	36	20	13	209
Professional	1	3	1	1	8	12	8	3	2	4	2	2	47
Agricultural.....	9	15	18	11	11	11	4	2	4	13	5	1	104
Clothing and Garb.....	14	21	17	22	15	13	11	9	5	6	11	8	152
Agents, etc.....	6	10	9	6	10	5	6	11	2	7	9	5	86
Laborers	56	83	72	77	70	63	53	56	44	43	51	27	695
Service, Domestic, etc.....	23	31	33	26	29	12	21	9	20	15	24	11	254
R. R. and Transportation....	13	20	17	17	21	16	10	18	13	20	14	12	191
Children.....	5	10	3	5	9	7	5	11	6	2	13	4	80
Miscellaneous	12	8	6	7	8	12	9	4	8	15	6	9	104
Totals	354	398	406	388	420	293	279	275	241	347	328	195	3,924

ANNUAL REPORTS AND STATISTICS

OF THE

Sub-departments of the Board of Police.

BUREAU OF CRIMINAL INVESTIGATION.

DATA.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Total.
Value of Property:													
(1) Lost and Stolen.....\$	314	894	378	1112	922	642	775	233	322	534	306	469	6,901
(2) Recovered.....\$	237	395	191	598	355	206	655	54	192	446	213	183	3,725
(3) Still Missing.....\$	77	499	187	514	567	436	120	179	130	88	93	286	3,176
Search Warrants.....	1	.....	.....	.....	2	1	1	.....	3	3	.....	.....	16
Cases Investigated.....	5	4	5	5	6	7	7	8	6	5	7	4	69
OFFENCES.	NUMBER OF ARRESTS.												
Arson .....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Assault.....	.....	.....	.....	.....	1	.....	.....	1	2	.....	.....	1	7
Breaking and Entering.....	2	3	1	6	.....	3	5	10	1	.....	2	.....	33
Bastardy.....	.....	.....	1	.....	.....	1	.....	3	.....	.....	.....	1	6
Capias.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Concealing Mor'ged Property	.....	.....	1	.....	.....	.....	.....	2	.....	1	.....	.....	4
Counterfeiting.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Drunkenness.....	1	1	1	.....	1	2	2	1	1	1	.....	.....	11
Embezzlement	1	.....	1	.....	1	.....	1	2	1	1	.....	1	9
Escape from Prison.....	.....	.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	3
False Answers.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
False Pretences.....	.....	1	.....	1	.....	.....	.....	1	.....	.....	1	1	5
Forgery .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Insane	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	3
Illegally Removing Baggage.	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Larceny	3	4	3	5	4	3	2	4	4	2	10	5	49
Lewd and Lascivious.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	2
Neglect of Family.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	2
Rape.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	3
Receiving Stolen Property..	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2
Polygamy.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Suspicious Persons.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....	3
Unlicensed Peddling.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Violation City Ordinance.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Violation Liquor Laws.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2
Threats.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Total Arrests	10	11	12	14	9	10	14	29	11	10	16	9	155

THE KEEPER OF THE LOCK-UP.

DATA.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Totals.
Money taken from Prisoners.....	\$218.20	\$228.31	\$269.09	\$414.14	\$655.23	\$272.85	\$347.69	\$525.89	\$332.85	\$368.44	\$780.35	\$637.05	\$5350.09
Defective Streets and Sidewalks...	24	17	11	23	32	13	17	3	11	3	52	86	292
Defective Lamps, etc.....	81	80	177	166	270	221	364	758	114	470	196	78	2,945
Obstructions Removed from Sts...	6	1	12	2	9	6	1	11	.....	33	3	12	99
Store Doors Found Unlocked.....	40	74	41	57	44	41	84	63	74	62	45	109	774
Lost Children Rest'd to Parents...	11	9	12	9	9	7	5	3	3	2	11	15	115
Stray teams found and put up....	3	2	4	2	4	3	5	3	.....	4	2	26	49
Drunks Assisted Home.....	8	.....	24	13	.....	.....	.....	.....	20	6	34	34	133
Disturb's quelled without arrest..	8	.....	21	30	.....	.....	.....	.....	19	6	42	34	160

RECORD OF LODGERS.

Male	13	12	6	18	10	3	13	9	7	11	5	1	107
Female	2	2	2	1	1	1	.....	1	.....	1	1	1	12
Minors, Male	3	.....	.....	3	1	1	.....	.....	2	2	.....	.....	12
Minors, Female .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Resident .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Non-Resident	15	14	8	19	11	3	13	6	7	12	5	1	116
American	5	2	2	13	6	.....	8	6	5	10	5	1	63
Foreign	10	12	6	6	5	3	5	3	2	2	1	1	58
Totals	15	14	8	19	11	3	13	9	7	12	6	2	119

THE INSPECTOR OF LICENSES.

[illegible]

MATRON OF THE POLICE STATION.

OFFENCES.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Totals.
Adultery.....			1	1	1	2				1	2	1	8
Assault.....	4		1	1								2	9
Concealing Mortgaged Property.....													1
Drunkenness.....	48	73	57	62	60	36	39	36	27	40	58	21	557
Dog, Unlicensed Keeping.....													1
Fornication.....		2	1	1	3	4				1			17
Idle and Disorderly.....	1		1				1						6
Illegally Removing Baggage.....													1
Insane.....			2	1			2			1	3		9
Larceny.....	6	1	3	1			1	1	3	1	8	3	28
Lewdness.....						1		3		1			7
Manslaughter.....													1
Safe Keeping.....	1					1							3
Stubbornness.....			2							1	2	1	7
Vagrant.....				1		1	1			1			1
Violation Liquor Law.....					1	1	1			1	4	2	11
Number Arrested.....	60	77	66	69	65	47	44	41	38	50	73	30	660
Number of Minors.....	1		4	1	2	3	4	3	2	2	3	1	26
Money taken from and returned to Women.....	\$13.08	\$1.55	\$7.41	\$7.36	\$36.83	\$25.79	\$9.54	\$1.25	\$4.79	\$0.78	\$25.31	\$3.88	\$137.47

PATROL WAGON SERVICE.

DATA.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Totals.
Wagon Calls, Number.....	250	283	276	289	257	212	178	153	154	226	204	98	2580
Arrests by Wagon, Number.....	287	345	334	318	340	232	218	194	180	259	246	125	3078

The following statistics show the work of the Police Telegraph Signal System during the year:

No. of duty calls sent from boxes to headquarters	-	400,424
No. of telephone calls sent from boxes to headquarters	28,879	
No. of wagon calls sent from boxes to headquarters	-	2,578
No. of prisoners arrested by wagon	- - - -	3,078
No. of miles travelled by wagon	- - - -	2,671 $\frac{3}{4}$

STATISTICS OF MINOR LICENSES FOR THE YEAR.

Licenses granted:

Innholders	- - - - -	15
Common Victuallers	- - - - -	386
Junk Collectors	- - - - -	88
Junk Dealers	- - - - -	12
Dealers in Second-Hand Goods	- - - - -	13
Hackney Coaches, Etc.	- - - - -	28
Job and Express Wagons	- - - - -	206
Lunch (Night) Wagons	- - - - -	6
Fish Wagons	- - - - -	17
Auctioneers	- - - - -	36
Pawnbrokers	- - - - -	12
Employment Offices	- - - - -	18
Pool and Billiard Rooms	- - - - -	36
Theatres	- - - - -	8
Sunday Concerts	- - - - -	10
Bowling Alleys	- - - - -	1
Amusement Permits	- - - - -	29
Circuses	- - - - -	2
Hawker and Pedlar	- - - - -	764

Licenses revoked:

Common Victualler	- - - - -	34
Employment Office	- - - - -	1
Pawnbroker	- - - - -	1

Express Wagon	-	-	-	-	-	-	-	-	1
Hawker and Pedlar	-	-	-	-	-	-	-	-	4
Hackney Coach	-	-	-	-	-	-	-	-	1
Pool and Billiard Room	-	-	-	-	-	-	-	-	7
Theatre	-	-	-	-	-	-	-	-	1

THE ROLL OF HONOR.

The following members of the Lowell Police Force were specially and publicly commended for duty well done and exhibiting a spirit and quality in its performance worthy of encouragement and emulation :

Connors, Martin	Sergeant.	G. O. No. 20.	Sept. 29, 1898
Breen, Dennis J.	Patrolman.	" " 20.	Sept. 29, 1898
Cawley, Peter	"	" " 17.	June 3, 1898
Crowley, John B.	"	" " 21.	Sept. 29, 1898
		" " 25.	Nov. 28, 1898
Fox, John W.	"	" " 23.	Oct. 18, 1898
Hurley, James F.	"	" " 23.	Oct. 18, 1898
Ingalls, Lindsey E.	"	" " 22.	Oct. 5, 1898
McKay, John	"	" " 20.	Sept. 29, 1898
O'Connell, Michael	"	" " 19.	Aug. 25, 1898
Perkins, Everett E.	"	" " 17.	June 3, 1898
Welch, John N.	"	" " 18.	July 30, 1898
		" " 24.	Nov. 28, 1898

John F. Healey, an officer but recently appointed to the Permanent Reserve, exhibited a resolution, courage and tenacity of purpose in the discharge of his duty that call for the highest admiration and praise of his superiors.

A little after midnight of March 4, 1899, Officer Healey discovered that the premises of Scannell & Wholey, on Tanner Street, had been broken into, and, entering the office, found the burglars in possession. He attempted at once the arrest of the criminals, who resisted with force and arms. The officer's pistol failed to act, and he was overpowered, after being shot three times, and then bludgeoned into insensibility. When he recovered consciousness he was weak and exhausted from wounds and loss of blood; but despite his pain and exhaustion he rose to his feet, staggered from the building, blowing an alarm, and managed to reach a signal box, whence he reported his condition and the circumstances to his superior. Officer Healey was carried at once to St. John's Hospital, where he lay for weeks between life and death. The murderous assault on Officer Healey was the culmination of a series of burglaries and crimes that had engaged the anxious attention of the Police Department for months; and it led to the arrest of the criminals. Four days later the assailants of the officer were located in a building on Dutton Street, from which they escaped, and were captured on the street after a resistance with firearms. The officers engaged in this capture were led by Lieutenant James Brosnan, who wounded one of the prisoners, disabling his weapon and securing him.

GENERAL ORGANIZATION OF THE POLICE.

SUPERINTENDENT.

GEORGE R. DAVIS.

DEPUTY SUPERINTENDENT.

WILLIAM B. MOFFATT.

CAPTAIN.

WILLIAM R. KEW.

LIEUTENANTS.

JAMES BROSNAN,

GEORGE B. PALMER,

JAMES E. WEBSTER.

SERGEANTS.

HUGH DOWNEY,

MARTIN CONNORS.

INSPECTORS CRIMINAL.

THOMAS E. ALLEN,

CHARLES LAFLAMME.

INSPECTORS LIQUOR.

DAVID J. DONALDSON,

FRANK GOODWIN.

INSPECTOR CLAIMS.

MICHAEL E. McDONALD.

WARRANT AND COURT OFFICERS.

WILLIAM G. BUMPS,

HENRY FARRINGTON,

JACOB G. FAVOR,

ISAAC L. LIBBY.

TURNKEYS.

ALFRED M. HOLMAN,

JAMES A. MCQUADE.

DAY PATROL—First Platoon.

Breault, Eloi N.,

Lane, Daniel W.,

Buchanan, John,

Lennon, Michael J.,

Cawley, Peter,

Libby, Albert E.,

Clement, Horace W.,

Mackenzie, John R.,

Crowley, John B.,

O'Connell, Michael,

Crowley, John J.,	Page, Alonzo J.,
Fox, Edward,	Sanborn, Thomas J.,
Fox, Frank,	Sparks, John F.,
Grinnell, Enoch N.,	Tilton, John W.,
Holland, James E.,	Walsh, John A.,
Whitney, Frank H.	

NIGHT PATROL—First Platoon.

Blood, Josiah S.,	Kiernan, Michael,
Boyle, James,	Leighton, John L.,
Burnett, William C.,	Maguire, Hugh,
Cogger, Daniel W.,	Markham, James,
Coleman, Thomas F.,	Marshall, George W.,
Corcoran, Peter T.,	McCloughry, Thomas,
Curran, Peter,	McKay, John H.,
Dennett, John S.,	Moloney, Thomas A.,
Dow, James E.,	Moore, Francis E.,
Dwyer, Philip,	O'Brien, William H.,
Fitzgerald, Thomas H.,	O'Connell, John,
Fox, John W.,	Provencher, Napoleon,
Freeman, John,	Riley, James,
Grady, William H.,	Ryan, Bartholomew,
Hill, Charles S.,	Swan, Edward T.,
Howard, Cornelius,	Tilton, Herman N.,
Hurley, James F.,	Welch, Redmond, Jr.,
Kane, Bartholomew,	Welch, John N.

NIGHT PATROL.—Second Platoon.

Breen, Dennis J.,	McIntee, Cormack,
Creahin, John,	McNabb, James,
Dunlavy, James,	Mulry, John J.,
Ganley, John J.,	Murphy, Anthony,
Hill, Edward E.,	Perkins, Everett E.,
Hogan, David H.,	Quinn, Henry F.,
Ingalls, Lindsey E.,	Whittaker, John T.,
Leighton, Euric L.,	Whitworth, James H.,
Marshall, Frank K.,	Young, George H.

RESERVE FORCE.

Abbott, George S.,	Lynch, Jeremiah,
Conway, John E.,	Neely, D. Wesley,
Frawley, Patrick J.,	Noye, Jose V. M.,
Giroux, William,	Robinson, George W.,
Healy, John F.,	Wilson, William H.

ELECTRICIAN.

Michael J. Burns.

NIGHT OPERATOR.

James H. Howard.

DRIVERS OF PATROL WAGON.

Frederick L. Davis,	James W. Kilburn.
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PATROL GUARD.

Chester E. Ryder,	John Hickson.
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HOSTLER.

Albert Crowell.

POLICE MATRON.

Margaret Wallace.

CHARMAN.

George W. Lewis.

SPECIAL DETAIL TO ASSIST THE LIQUOR INSPECTORS.

Thomas R. Atkinson,	Alexander Duncan,
Charles Gregg,	Martin A. Maher,
Matthew J. McCann.	

Property List of the Lowell Police Department.

OFFICE OF BOARD OF POLICE.

Two desks, 1 typewriter and table desk, Smith Premier; 1 safe, Morris & Co.; 1 letter press and stand, 2 desk chairs, 1 stool, 12 chairs, 1 book press, 1 large umbrella stand with mirror, 1 clothes press, 2 office tables, 1 counter desk with drawers, 2 waste paper baskets, 1 seal of department, 6 spittoons, 25 patent tin filing cases, 1 clock, 5 window screens, 1 revolving book rack.

GUARD ROOM.

One hundred and one closets, 1 keeper's desk, 6 settees, 2 mirrors, 1 ice tank, 2 desks, 30 chairs, 1 clock, 10 spittoons, 1 gas stove, 1 waste basket.

SUPERINTENDENT'S OFFICE.

One library, 1 desk, 1 table, 1 mirror, 1 safe, 1 umbrella stand, 1 hat rack, 9 chairs, 1 carpet, 2 spittoons, 3 screens, 3 curtains, map of Lowell, 2 waste baskets, miscellaneous lot of books.

DEPUTY'S OFFICE.

Two desks, 2 chairs, 1 table, 1 warrant rack, 1 record rack, 1 mirror, 1 screen, 1 curtain.

WARRANT OFFICERS' ROOM.

Three desks, 1 book, 4 chairs.

DETECTIVES' OFFICE.

Two desks, 5 chairs, 1 spittoon, 2 waste baskets, 1 rogues' gallery, 1 mirror, 1 warrant rack.

LIQUOR INSPECTORS' OFFICE.

Four desks.

BED ROOM.

Four iron bedsteads, 8 mattresses, 2 chairs, 1 Fairbanks scale.

CELLS.

1 surgeon's case, 1 closet, 1 table.

STOCK IN STABLE.

Ten horses, 1 Black Maria on wheels, 1 Black Maria on runners, 2 patrols on wheels, 1 patrol on runners, 3 Concord wagons, 2 Goddard buggies, 3 light cutter sleighs, 1 two-seated pung, 1 square wagon, 2 bicycles (Columbias) chainless, 3 sets light harness, 4 single heavy truck harness, 1 set double heavy harness, 5 halters, 7 street blankets, 2 stable blankets, 10 riding saddles and bridles, 5 sets of riding leggings, 2 sets of spurs, 50 feet hose, 2 wagon jacks, 2 pails, 6 wrenches, 4 leather muzzles, 3 body brushes, 3 Dandy brushes, 2 curry combs, 8 sponges, 2 chamois, 2 dusters, 2 brooms, 1 hay cutter, 2 pitchforks, 5 manure cans, 2 mops, 1 clock, 1 rubber apron, 1 watering pot, 2 horse weights, 5 hitch ropes, 1 pair of trucks for patrol sleigh, 4 tons hay, 100 bushels oats, 1 bag shorts, 50 pounds rock salt, 3 bales of straw, $\frac{1}{2}$ gallon of axle grease, 1 can castorine, 4 snow shovels, 3 iron shovels.

ELECTRICAL DEPARTMENT.

One double Gamewell desk and fixtures for ten circuits, 1 slate switchboard for same, 190 cells of gravity battery, 180 cells of open circuit battery, 1 indicator and transmitter for stable, 12,000 feet of six-wire cable, 60 miles of No. 9 and 10 iron wire, 57 patrol boxes, 57 battery boxes, 1 extra register, 1 extra time stamp, 4 extra paper reels, 1 magneto bell, 300 pounds of vitriol, 150 gravity zincs, 50 pencil zincs, 150 gravity coppers, 10 pounds of office wire, 20 telephone cords, 1 mile of four-wire cable, 1 mile of No. 10 covered wire, 2,100 insulators, 325 pounds

of zinc, 50 pounds of copper, 550 rolls of register paper, 3 watering cans, 4 pails, 50 cells, Burnham & Gordon battery, 2 spark coils, 8 automatic gas burners, 8 pull-down burners, 1,000 feet $\frac{1}{2}$ -inch galvanized iron pipe, 5,000 feet of No. 14 insulated wire, 50 mica insulators, 2 extension ladders, 2 benches, 4 vises, 1 die stock and dies for $\frac{1}{2}$ -inch pipe, 1 pipe cutter, 1 hack saw and 6 blades, 6 brass unions, 20 box boards, 12 vibrating bells, 2 tap bells, 100 pipe staples, 100 feet rope, 2 blocks and falls, 1 pair of climbing irons, 3 pliers, 6 files, 2 tape measures, 24 time stamp tapes, 2 telephone stands, 12 junction boxes, 12 bits for boring, 8 electric light fixtures, 30 incandescent lamps, 10 extra lamps, 1 knife switch, 5 electric light switch, 15 porcelain cutouts, 2 double pole switches, 1 rotary fan, 1 extra relay, 2 tables, 5 chairs.

JANITOR'S DEPARTMENT.

1 step ladder, 1 mop wringer, 1 pail, 1 duster, 2 brooms, 1 brush.

LIST OF MEMBERSHIP OF THE LOWELL POLICE FORCE.

Name.	Rank.	Age.	Nativity.	Married or Single.	Former Occupation.	When Appointed.	Residence.
Davis, George R.	Superintendent...	46	Maine...	M	Mason.....	June, 1876...	35 Huntington street.
Moffatt, William B.	Deputy Supt.	46	Ireland...	M	Clerk.....	March, 1881...	35 London street.
Kew, William R.	Captain.....	47	Vermont	M	Watchman.....	Feb., 1880...	17 Princeton street.
Brosnan, James.	Lieutenant.	39	Ireland...	M	Teamster.....	Oct., 1888...	194 Perry street.
Pulmer, George E.	"	41	Maine...	M	Expressman.....	Dec., 1887...	23 Eighteenth street.
Webster, James E.	"	58	Maine...	M	Watchman.....	March, 1865...	273 Westford street.
Allen, Thomas E.	Inspector, Criminal	47	Mass...	M	Plumber.....	Oct., 1881...	32 West street.
Lafamme, Charles.	"	44	Canada...	M	Box Maker.....	March, 1881...	784 Moody street.
Donaldson, David J.	" Ligator.	43	Canada...	M	Morocco Dresser...	Feb., 1887...	204 Wentworth avenue.
Goodwin, Frank.	"	54	Vermont	M	Watchman.....	March, 1872...	17 Coral street.
McDonald, Michael E.	" Claims.	54	Mass...	M	Clerk.....	June, 1876...	13 Shedd street.
Connors, Martin.	Sergeant...	36	Ireland...	M	Plasterer.....	Dec., 1887...	282 Concord street.
Downey, Hugh.	"	41	Ireland...	M	Carpenter.....	Oct., 1889...	183 Pleasant street.
Abbott, George S.	Patrolman	29	England.	S	Second Hand.....	June, 1898...	5 Ready avenue.
Atkinson, Thomas R.	"	32	Maine...	M	Carpenter.....	May, 1894...	21½ Loring street.
Blood, Josiah S.	"	57	N. H....	M	Clerk.....	May, 1882...	184 A street.
Boyle, James.	"	40	Mass...	M	Fireman.....	Feb., 1884...	34 May street.
Breault, Elot N.	"	39	Canada...	M	Clerk.....	Dec., 1884...	884 Moody street.
Breen, Dennis J.	"	38	Ireland...	M	Moulder.....	Dec., 1891...	768 Moody street.
Buchanan, John.	"	56	N. S....	M	Nason.....	Jan., 1871...	106 Beech street.
Bumps, William G.	"	60	Maine...	M	Expressman.....	March, 1881...	256 Gibson street.
Favor, Jacob G.	War'nt & Ct Officer	69	Maine...	M	Hatter.....	April, 1859...	
Burnett, William C.	"	36	N. S....	M	Expressman.....	May, 1885...	62 West Sixth street.
Cawley, Peter.	Patrolman	41	Vermont	M	Railroadman.....	Feb., 1884...	872 Bridge street.
Clement, Horace W.	"	42	Maine...	M	Nurse.....	Oct., 1888...	26 Eighteenth street.
Cogger, Daniel W.	"	36	Mass...	M	Clerk.....	Dec., 1892...	834 Moody street.
Coleman, Thomas F.	"	36	Mass...	M	Painter.....	Dec., 1892...	736 Central street.
Conway, John E.	"	29	Mass...	M	Agent.....	Nov., 1897...	16 Linden street.
Conoran, Peter T.	"	36	Ireland...	M	Clerk.....	Nov., 1897...	336 High street.
Creahan, John.	"	46	Ireland...	M	Clerk.....	Feb., 1881...	411 Pine street.
Crowley, John B.	"	58	Ireland...	M	Operative.....	Feb., 1884...	112 Walker street.
Crowley, John J.	"	37	Mass...	S	Machinist.....	Feb., 1887...	107 Blossom street.
Curran, Peter.	"	46	N. Y....	S	Teamster.....	Dec., 1887...	37 Durant street.
Dennett, John S.	"	39	Ireland...	S	Laborer.....	Dec., 1891...	55 Read street.
Dow, James E.	"	50	N. H....	M	Second Hand.....	Jan., 1885...	50 C street.
Duncan, Alexander.	"	51	Maine...	M	Carpenter.....	Oct., 1889...	16 Court street.
Dunlavy, James.	"	34	Scotland	S	Wool Sorter.....	May, 1891...	11 Butterfield street.
Dwyer, Philip.	"	52	Mass...	M	Moulder.....	Dec., 1880...	262 Concord street.
Farrington, Henry.	War'nt & Ct Officer	31	Ireland...	S	Barber.....	July, 1895...	
		61	Maine...	M	Expressman.....	July, 1871...	5 Coral street.

LIST OF MEMBERSHIP OF THE LOWELL POLICE FORCE.—Continued.

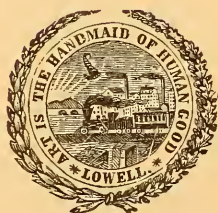
Name.	Rank.	Age.	Nativity.	Married or Single.	Former Occupation.	When Appointed.	Residence.
Fitzgerald, Thomas H.....	Patrolman	32	Mass.....	M	Machinist.....	Dec., 1894....	215 Manchester street.
Fox, Edward.....	"	54	Ireland..	M	Watchman.....	Feb., 1884....	Lawrence, near Moore street.
Fox, Frank.....	"	39	Mass.....	M	Student.....	Oct., 1889....	20 Chambers street.
Fox, John W.....	"	32	Mass.....	M	Print Works.....	May, 1891....	598 Bridge street.
Freeway, Patrick J.....	"	33	Ireland..	M	Printer.....	Nov., 1897....	34 Burns street.
Freeman, John.....	"	42	Mass.....	M	Dyer.....	Nov., 1897....	491 Gorham street.
Ganley, John J.....	"	45	Mass.....	M	Milkman.....	Dec., 1894....	81 Boynton street.
Giroux, William.....	"	32	Canada..	M	Second Hand.....	Nov., 1898....	37 Second avenue.
Grady, William H.....	"	45	Mass.....	M	Plasterer.....	March, 1881..	39 Lundberg street.
Gregg, Charles.....	"	46	N. H.....	M	Bucher.....	Feb., 1880....	96 Fort Hill avenue.
Grimell, Enoch N.....	"	56	Mass.....	M	Carpenter.....	March, 1881..	110 Appleton street.
Haley, John F.....	"	27	Ireland..	S	Steamfitter.....	June, 1898....	30 Fulton street.
Hickson, John.....	"	45	Ireland..	M	Clerk.....	Dec., 1890....	60 Mammoth road.
Hill, Charles S.....	"	39	Mass.....	M	Watchman.....	May, 1895....	29 Fifth street.
Hill, Edward E.....	"	35	Mass.....	M	Blacksmith.....	May, 1894....	308 High street.
Hogan, David H.....	"	38	Mass.....	M	Clerk.....	Dec., 1892....	82 Varney street.
Holland, James E.....	"	44	Penn.....	M	Printer.....	Oct., 1881....	34 Second avenue.
Hollan, Alfred M.....	Turnkey.	54	Maine....	M	Painter.....	Oct., 1881....	126 Powell street.
Howard, Cornelius.....	Patrolman	52	Ireland..	M	Teamster.....	Feb., 1884....	79 Andrews street.
Hurley, James F.....	"	41	Mass.....	M	Machinist.....	Dec., 1891....	778 Moody street.
Ingalis, Lindsey E.....	"	41	Mass.....	M	Machinist.....	Oct., 1888....	110 Beech street.
Jones, William B.....	City Hall Officer.	68	N. Y.....	M	Stonecutter.....	Oct., 1877....	221 Branch street.
Kane, Bartholomew.....	Patrolman	35	Mass.....	S	Wool Sorter.....	Dec., 1892....	88 Agawam street.
Kernan, Michael.....	"	34	Ireland..	M	Operative.....	May, 1895....	9 State street.
Lane, Daniel W.....	"	47	Mass.....	M	Butcher.....	Jan., 1879....	16 Smith avenue.
Leighton, Eurie L.....	"	37	Maine....	M	Carpenter.....	May, 1895....	102 Ford street.
Leighton, John L.....	"	34	N. H.....	M	Expressman.....	Oct., 1889....	78 South Loring street.
Lennon, Michael J.....	"	49	N. B.....	M	Engineer.....	May, 1888....	10 Pleasant street.
Libby, Albert E.....	"	66	Maine....	S	Watchman.....	March, 1869..	61 Eighteenth street.
Libby, Isaac L.....	War'nt & Ch Officer	72	Maine....	S	Watchman.....	May, 1864....	11 Coral street.
Lynch, Jeremiah.....	Patrolman	36	Ireland..	M	Operative.....	Oct., 1897....	79 Andrews street.
Mackenzie, John R.....	"	40	N. S.....	M	Clerk.....	May, 1888....	124 First street.
Maheir, Hugh.....	"	35	N. Y.....	M	Hackman.....	Dec., 1892....	178 Perry street.
Martin, Martin A.....	"	37	Ireland..	M	Machinist.....	Dec., 1892....	92 Twelfth street.
Marlham, James.....	"	39	Ireland..	M	Carrier.....	Dec., 1891....	12 Burns street.
Marshall, Frank W.....	"	31	Vermont	S	Tinsmith.....	March, 1897..	57 Claire street.
Marshall, George W.....	"	43	Mass.....	M	Overseer.....	Feb., 1881....	485 Parker street.
McCam, Matthew J.....	"	34	Australia	M	Machinist.....	June, 1895....	186 Pleasant street.
McCloughry, Thomas.....	"	35	Ireland..	M	Clerk.....	May, 1894....	66 West Fourth street.

McIntee, Cormack.....	Patrolman.....	52	Ireland..	M	Carpenter.....	Jan., 1885....	109 Jewett street.
McKay, John H.....	".....	39	Mass....	M	Wool Sorter.....	Dec., 1884....	138 Bartlett street.
McNabb, James.....	".....	55	Mass....	S	Teamster.....	Dec., 1875....	9 West Meadow road.
McQuade, James A.....	Turnkey.....	55	Mass....	M	Moulder.....	Jan., 1879....	227 Concord street.
Moloney, Thomas A.....	Patrolman.....	41	Mass....	S	Rogean.....	May, 1895....	44 Whipple street.
Moore, Francis E.....	".....	48	Mass....	M	Engineer.....	Oct., 1889....	545 Middlesex street.
Mulry, John J.....	".....	32	Mass....	S	Steamfitter.....	Dec., 1891....	71 Bowers street.
Murphy, Anthony.....	".....	41	Ireland..	M	Cochman.....	Dec., 1892....	191 Concord street.
Neely, D. Wesley.....	".....	27	Mass....	S	Operative.....	Dec., 1897....	115 Liberty street.
Noye, Jose V. M.....	".....	30	Penn....	S	Second Hand.....	Nov., 1897....	64 Worthen street.
O'Brien, William H.....	".....	40	Mass....	M	Railroadman.....	June, 1889....	13 June street.
O'Brien, John.....	".....	58	Ireland..	M	Operative.....	Feb., 1890....	190 Perry street.
O'Connell, Michael.....	".....	34	Ireland..	M	Clerk.....	Dec., 1892....	36 Linden street.
Page, Alonzo J.....	".....	60	Maine....	M	Carpenter.....	Jan., 1869....	410 Westford street.
Pertins, Everett E.....	".....	24	N. B.....	M	Boil Maker.....	June, 1895....	18 Leroy street.
Provancher, Napoleon.....	".....	44	Mass....	M	Ornamentier.....	Dec., 1884....	39 Fourth avenue.
Quinn, Henry F.....	".....	49	Ireland..	M	Loomfixer.....	Dec., 1887....	45 Durant street.
Riley, James.....	".....	56	Ireland..	S	Carpenter.....	Aug., 1881....	150 Pleasant street.
Robinson, George W.....	".....	29	Vermont	M	Watchman.....	June, 1898....	5 Wachusett street.
Ryan, Bartholomew.....	".....	40	Ireland..	M	Conductor.....	Dec., 1892....	42 Sidney street.
Ryder, Chester E.....	".....	49	Maine....	S	Watchman.....	May, 1888....	855 Lawrence street.
Saunborn, Thomas J.....	".....	63	N. H.....	M	Watchman.....	May, 1858....	126 Grove street.
Sparks, John F.....	".....	37	Mass....	M	Janitor.....	May, 1895....	503 Beacon street.
Swan, Edward T.....	".....	39	Mass....	M	Agent.....	Dec., 1892....	42 Blossom street.
Tilton, Herman N.....	".....	55	Mass....	M	Moulder.....	Dec., 1873....	57 South Walker street.
Tilton, John W.....	".....	56	Mass....	S	Patrol Driver.....	May, 1894....	53 Third avenue.
Walsh, John A.....	".....	43	Mass....	M	Thsmith.....	March, 1883....	12 Whipple street.
Weich, John N.....	".....	32	Ireland..	S	Clerk.....	May, 1895....	511 Lawrence street.
Weich, Redmond, Jr.....	".....	37	Mass....	S	Expressman.....	Feb., 1887....	42 North street.
Whitney, Frank H.....	".....	41	Maine....	M	Clerk.....	June, 1889....	108 D street.
Whitaker, John T.....	".....	49	England.	M	Seaman.....	May, 1888....	63 Congress street.
Whitworth, James H.....	".....	40	England.	M	Carpenter.....	Dec., 1894....	1 Billerica street.
Wilson, William H.....	".....	34	Ireland..	M	Florist.....	Dec., 1897....	17 Harrison street.
Young, George H.....	".....	36	Maine....	M	Railroadman.....	Aug., 1896....	12 Colburn street.

EMPLOYEES.

Burns, Michael J.....	Electrician.....	38	England.	S	Electrician.....	April, 1891....	24 Fulton street.
Howard, James H.....	Operator.....	36	Mass....	M	Clerk.....	Jan., 1891....	880 Gorham street.
Davis, Frederick L.....	Driver of Patrol.....	39	Maine....	M	Ice-man.....	Dec., 1892....	174 Market street.
Kilburn, James W.....	".....	42	Mass....	M	Clerk.....	Dec., 1890....	92 Shaw street.
Crowell, Albert.....	Hostler.....	51	Mass....	M	Clerk.....	April, 1896....	378 Rogers street.
Wallace, Margaret.....	Matron.....	50	Canada..	S	Nurse.....	Sept., 1887....	Police Station.
Lewis, George W.....	Charman.....	55	".....	M	Janitor.....	Dec., 1898....	24 Concord street.

ANNUAL REPORT
OF THE
TRUSTEES
OF THE
CITY LIBRARY
OF LOWELL,
FOR THE YEAR 1898.



LOWELL, MASS. :
BUTTERFIELD PRINTING CO.
1899.

Administration of the City Library, 1898.

BOARD OF TRUSTEES.

HON. JAMES W. BENNETT, Mayor of the City,
HON. GEORGE F. RICHARDSON, STEPHEN J. JOHNSON, M.D.
FRANK P. PUTNAM, THOMAS WALSH,
 PHILIP J. FARLEY.

LIBRARIAN.

FREDERICK A. CHASE.

ASSISTANT LIBRARIAN.

HARRIET F. HILL.

ASSISTANTS.

WALTER H. GILMAN,	STEPHEN T. WYMAN,
CLARA BEARD,	BERTHA G. KYLE,
MARION F. BROWN,	ALICE M. MYERS,
GEORGE F. O'DWYER,	GEORGE H. CHAPMAN.

SUPERINTENDENT OF READING ROOM.

EDWARD F. SLATTERY.

REPORT OF THE TRUSTEES.

LOWELL, MASS., Dec. 31, 1898.

To the City Council of the City of Lowell:

The Trustees of the City Library of Lowell respectfully submit the following report for the year 1898 :

FINANCIAL STATEMENT.

RECEIPTS.

Appropriation by City Council.....	\$15,000.00
Credit	190.06
	<hr/>
	\$15,190.06

EXPENDITURES.

Salaries.....	\$ 8,951.06
Lighting.....	1,218.74
Books	2,201.18
Periodicals.....	876.68
Binding.....	395.90
Sundries.....	1,421.78
Balance.....	124.72
	<hr/>
	\$15,190.06

We beg to submit also an estimate of the amount of money which will be required by the library for the year 1899, as follows :

Salaries.....	\$ 8,950.00
Lighting.....	1,250.00
Binding.....	500.00
Sundries (including printing, but exclusive of books and magazines).	1,400.00
	<hr/>
	\$12,100.00

The above estimate is based on the actual figures for 1898, and represents only the amount absolutely needed to pay the running expenses of the library before a single book or periodical can be purchased.

We are obliged to spend annually upwards of \$900 for magazines and newspapers for our reading rooms and we do not think that any of them can be dispensed with. To keep up the present standard of the library and to keep pace with the increased demands upon it, it is our judgment that the further sum of \$4,000 for books and \$900 for magazines and newspapers should be added to the above \$12,100, making in all \$17,000.

We would therefore respectfully ask for an appropriation which shall not be less than this sum.

We would say in this connection that the library is growing rapidly in size and in usefulness and that as an adjunct to the public school system it is doing important work. Figures for the past year show a marked advance in the books taken out by the teachers

for use in the schools. The circulation of books among the general public has for the past four years varied from 145,000 to 165,000 volumes, and shows a marked and healthy increase.

The publication of bulletins giving the contents of the library on special subjects has been continued by the publication of lists on Shakespeare, British Poets, Artists.

Appended are the usual tables of the growth and use of the library and a full list of donors.

JAMES W. BENNETT,
GEORGE F. RICHARDSON,
FRANK P. PUTNAM,
STEPHEN J. JOHNSON,
PHILIP J. FARLEY,
THOMAS WALSH.

Condition of the Library.

Volumes purchased.....	1,724
Volumes added by gift.....	70
Volumes added by binding periodicals.....	219
Worn-out books replaced.....	274
Duplicates purchased.....	141
Total number of volumes added.....	1,379
Total number of volumes in the library.....	58,127
Volumes lost and not paid for.....	34
Estimated value of the same.....	\$34.12
Periodicals and papers subscribed for.....	183
Periodicals and papers given.....	14
Number of volumes used, home and reference.....	142,523
Number of volumes consulted in Reference Room.....	15,673
Number of post cards sent to delinquents during the year..	2,921
Applicants received during the year.....	1,640
Applicants who did not call for cards.....	75
Names registered during the year.....	1,565
Number of names registered Dec. 21, 1897.....	15,140
Total registered to date.....	16,705
Library open 306 days.....	
Total circulation.....	142,523
Average daily circulation.....	466
Largest monthly circulation (January).....	15,633
Smallest monthly circulation (July).....	8,585
Largest daily circulation (January 26).....	1,149
Smallest daily circulation (July 21).....	144
Percentage of fiction read.....	69.5
Percentage of other classes.....	30.5

List of Donors to the Library.

1898.

NAMES.	Volumes.	Pamphlets.
Abbott, S. A. B.....	1	
Alexander, D. S.....	1	
American Antiquarian Soc., Worcester.....		1
Austin, J. O.....		1
Bancroft, Wm. A.....	1	
Boston Public Library.....	1	
Brooks, C. P.....		1
Chase, Walter G.....	1	
Chelsea, City of.....	1	
Cogswell, Mrs. Wm.....	1	
Collins, Miss May.....	1	
Colonial Dames of N. H. in Lowell.....	1	
"Cuba" Pub. Co.....	1	
Cushing, Mrs. O. E.....	4	
Cust, R. N.....	2	
Dennison, Christian.....	1	
Dexter, Mary.....	2	
Edson, Mrs. C.....	42	
Fay, Miss Lucy.....	1	
Fitchburg, City of.....	1	
Greenhalge, Mrs. F. T.....	3	
Hapgood, Warren.....	1	
Harvard University.....	1	
Hennessy, Harold M.....	1	
Hobbs, Franklin W.....	1	
Houghton, F. O. & Co.....	1	
Hubbard, Mrs. G. G.....	1	
Hucke, Julius.....	1	
Indianapolis Monetary Conference.....		1
Knox, Hon. W. S.....	1	
<i>Carried forward.....</i>	74	4

NAMES.	Volumes.	Pamphlets.
<i>Brought forward</i>	74	4
Koch, Theo. W.....		1
Lang, Wm. A.....	1	
Langley, S. P.....	1	
Libbey Glass Co.....	1	
Lowell, City of.....	10	
Lowell Textile School.....	1	
Lowell Women's Christian Temperance Union.	1	
Matthews, G. H. & Co.....	2	
Maynard, Mrs. Mary H. S.....		1
Morey, C. H.....	24	
Mudge, Rev. James.....	1	
Olin, Hon. Wm. M.....	5	
Olmstead, D. H.....		1
Palmer, Mrs. C. F....		1
Peabody Educational Fund.....		1
Porter, E. G.....	1	
Rice, Franklin P.....	2	
Richardson, Estate of Wm. A.....	1	
Russell, Miss M. Ella.....	12	
Simms, Joseph.....	1	
Sturtevant, B. F. Co.....	1	
Toronto, University of.....		1
Towle Mtg. Co.....	1	
United States Government:		
Supt. of Public Documents.....	160	128
Witham, Wm. C.....	2	
Total.....	302	138

Prof. M. Iatros. Gift of Napoleon pictures.

Arnold Welch. Gift of fossil shells.

REPORT
OF THE
CITY SOLICITOR,
OF
LOWELL, MASS.,

FOR THE
Year ending February 28, 1899.



LOWELL, MASS.:
LOWELL SUN PRINT. SUN BUILDING.
1899.

REPORT.

OFFICE OF THE CITY SOLICITOR,
Lowell, Mass., March 1, 1899.

Gentlemen of the City Council:

In compliance with the City Ordinances, I submit the following report of the business of the Law Department for the year ending February 28, 1899.

LEGISLATION.

Following the practise of the last two years I will refer briefly to the legislation of the session of 1898 especially applicable to or effecting the City of Lowell.

Chapter 173 of the Acts of 1898, which took effect March 15th of that year, entitled, "An Act Relative to Appointments in the Fire Department of the City of Lowell," gives to the Chief Engineer authority to discharge all subordinate officers and employees of the Fire Department of said city,

except the members of the Board of Engineers, and on the recommendation of said board, appoint as members of the permanent force, or as call-men without civil service examination, any person who has served as call or substitute call-man in said service for three or more successive years prior to the passage of the Act, and with the approval of said board to appoint and employ all such officers and employees.

Chapter 95 of the Resolves, appropriates, on certain conditions, the sum of fifteen thousand dollars for the Lowell Textile School, and Chapter 97 of said Resolves, appropriates the sum of two thousand dollars for the building of sidewalks about the grounds of the State Normal School in this city.

Chapter 45 of the Acts of 1898 authorizes cities to appropriate money for the payment of the charges of insurance companies as sureties on bonds of city officers.

Chapter 208, entitled, "An Act to Provide for the Appointment of Constables in Cities," does not effect the method of appointment in the City of Lowell.

Chapter 267, entitled, "An Act to Authorize Cities to Pension Firemen," authorizes cities, which have accepted the Act in the manner provided by Section 3, to pension any fireman who by reason

of personal disability incurred while in the discharge of his duty as fireman, is no longer able to perform active service as such fireman. This Act has not been accepted by the City of Lowell.

Chapter 162 provides that fire engines and apparatus shall have the right of way while passing through the streets of a city or town, and provides for the punishment of any person who wilfully and maliciously obstructs or retards the passage of such engines and apparatus while going to a fire.

Chapter 351 authorizes cities and towns to lay out, construct and maintain paths for bicycles, and to appropriate money to meet the expense of such laying out, construction and maintenance.

Chapter 361 provides that the treasurers of cities and towns, who neglect to make returns within thirty days, to the Treasurer of the Commonwealth, of moneys received for liquor licenses granted in said cities and towns, in accordance with Chapter 233 of the Acts of 1897, shall pay interest at the rate of 6 per cent. per annum on the proportion of said moneys which should have been paid to the Treasurer of the Commonwealth from the time they became due until the same are paid.

Chapter 391, entitled, "An Act Relative to the Support of the State Poor by Cities and Towns," refers to the reimbursement of cities and towns for moneys expended under certain conditions for

the support of State paupers, and the principle change effected in the law is that no bill presented to the State for such support shall be allowed unless it contains an endorsement declaring, that after full investigation no kindred able to pay the amount charged have been found.

Chapter 490, entitled, "An Act Relative to the Abuse of Corporate Powers," extends the remedy by injunction provided by Section 129 of Chapter 27 of the public statutes, so as to make it apply specifically to cities and include any proposed expenditure by any officer or agent of a city or town for a purpose, or in a manner not authorized by law. This Act furnishes a simple and effectual remedy against the illegal expenditure of money by a city or town or its officers or agents.

Chapter 526, entitled, "An Act to Authorize Cities and Towns to make Certain Temporary Loans," authorizes a city or town treasurer, or other proper officer, after a town has voted to issue bonds, note, scrip or other certificates of indebtedness, to borrow money before such securities have been sold in anticipation of the moneys to be derived from the sale thereof.

Chapters 529 and 570 legalize certain appropriations previously made by cities and towns for the benefit of persons entering the military and naval service of the United States or of the Common-

wealth in the war with Spain, or for the benefit of the families of such persons.

Chapter 548, entitled, "An Act to Revise and Codify the Laws Relative to Elections," changes, to some extent, the duties of City Clerk, Assessors, Mayor and Aldermen, and Registrars of Voters, but as it is a general revision of the election laws and must be, as it undoubtedly has already been, carefully studied by the officers in question, need not be further referred to here.

Chapter 578, entitled, "An Act Relative to Street Railways," effects very materially the relations between street railway corporations and the municipalities through which their lines extend, as respects taxation and the repairs of streets, and settles many questions which have heretofore occasioned friction between the municipality and the street railway company. No epitome of its provisions would be of any practical use in this report.

The above reference to the legislation of 1898 is not intended to be, by any means, a complete statement of the Acts of that year which may directly or indirectly effect the City of Lowell as a municipality. It is intended merely to refer to such legislation as suggests to the City Council or other officers of the city some action on their part, or changes in some manner their official duties, and might otherwise be overlooked.

LITIGATION.

3579. *Ellen Neaton vs. City of Lowell.*

This was an action of tort for personal injuries, entered in Court, January, 1898. The injuries were received by the plaintiff falling on the sidewalk on the northerly side of Summer Street, July 17, 1897, which fall was occasioned by a hole or depression in the sidewalk. The injury was very severe, plaintiff's leg having been broken in two places. After a careful examination of the condition of the walk at the place of the injury, I became satisfied that a verdict was probably inevitable and therefore compromised the suit for the sum of four hundred dollars (\$400).

1215. *Martin H. Nolte vs. City of Lowell.*

This was a petition to the Superior Court for a jury to assess the damage alleged to have been sustained by the petitioner in the taking of land and the laying out of Princeton Street. The County Commissioners awarded the petitioner the sum of six hundred and fifty dollars. The petition was filed in Court March 21, 1896. After an examination of the premises and obtaining the opinion of experts on the question of damages, a settle-

ment was effected for the sum of seven hundred and fifty dollars.

1597. *Catherine Rogers vs. City of Lowell.*

This was an action of tort for personal injuries received by the plaintiff by reason of a defect in the sidewalk on the southerly side of Lakeview Avenue. The defect consisted of an accumulation of snow and ice. The writ was dated June 4, 1896, and was entered in Court on the first Monday of July, 1896. The injuries consisted of a compound fracture of the right arm above the elbow. Settled for one hundred dollars.

1651. *Margaret Lee vs. City of Lowell.*

This was an action of tort for personal injuries alleged to have been received by the plaintiff on February 19, 1896, by a fall caused by a defect in the sidewalk on the southerly side of Market Street, near the corner of Adams. The defect consisted of a rough and uneven accumulation of snow and ice. The injury was a broken arm. Settled for one hundred dollars.

1832. *P. E. Beaudette vs. City of Lowell.*

This was an action of tort for personal injuries

and damage to a horse and carriage alleged to have been received May 29, 1896, and to have been occasioned by a defect in Varnum Avenue, which defect consisted of an iron hydrant located within the wrought and traveled part of said avenue and in front of the house of the late Atkinson C. Varnum. Writ dated September 26, 1896. Settled for one hundred and seventy-five dollars

330. *Samuel P. Pike vs. City of Lowell.*

This case has been pending since July, 1894, and was a petition for a jury to assess the damage for the taking of land of the petitioner for the Centralville main sewer. Settled for three hundred dollars (\$300), which is practically the amount originally awarded, with interest thereon.

3958. *Thomas Larkin vs. City of Lowell.*

This was an action of tort for the personal injuries alleged to have been received by the plaintiff by being thrown from his bicycle, by reason of a large hole or washout in Varnum Avenue at a point near the premises of one Thomas Varnum. The action was entered in the Superior Court on the first Monday of March, 1898, and was tried

before the jury at the September sitting of said Court. Jury returned a verdict for two hundred and seventeen dollars.

4070. *Catherine Sheldon vs. City of Lowell.*

This was an action of tort for personal injuries received by the plaintiff by stepping into a hole in the sidewalk on Bridge Street. The action was entered in Court on the first Monday of June, 1898. The hole in the sidewalk was caused by the removal of a post which was formerly a part of a fence in front of the premises formerly of J. M. G. Parker. An examination by the City Engineer showed that the hole was within the limits of the street. A physician was sent by me to examine and report upon the injury which was to the knee joint and was very severe and permanent. The plaintiff at the time of the injury was apparently in the exercise of due care. The case was settled for six hundred dollars.

4263. *Charles L. Adams vs. City of Lowell.*

Entered in Court the first Monday of August, 1898. This was an action of tort for personal injury to the plaintiff by reason of an alleged defect in Chelmsford Street. The defect complained of was a granite block which had been placed in the

street opposite the premises of one Davis, as a carriage block. The case was heard before the Committee on Claims, and at that hearing the plaintiff claimed one thousand dollars. By my advice, plaintiff was given leave to withdraw, as I thought it probable that the owner of the premises would be liable over, for, any damage which the city might be required to pay, and it seemed desirable that the damages should be assessed by a jury. Subsequent investigation showed that the city by its employees had placed the stone in the position which it occupied at the time of the accident and, therefore, the city had no claim against the owner of the premises. I therefore offered the plaintiff the sum of four hundred and fifty dollars in settlement of his damages, which sum was accepted.

1446. *Edward S. Howe vs. City of Lowell.*

1448. *George L. Goodale vs. City of Lowell.*

1447. *Joseph M. Wilson et al. vs. City of Lowell.*

1449¹. *Thomas J. Underwood vs. City of Lowell.*

1449. *Thomas J. Underwood vs. City of Lowell.*

1450. *Joseph M. Wilson vs. City of Lowell.*

The six last preceeding cases were writs of entry

and brought to recover certain tracts of land which the respective plaintiffs conveyed to the City of Lowell in 1889 and 1890 for the Pawtucket Boulevard, for an alleged breach of the conditions in said deeds respectively. The cases were fully reported on page 23 of my last annual report. The questions of law reserved by the Justice of the Superior Court, before whom the cases were tried, have since been argued before the full Court, and the defendant's contention that the condition in the several deeds was not broken by the establishment and maintainance by the city of the driven-well plant in the land was sustained, and the finding of the Superior Court in favor of the plaintiff as to all of these cases, except that of Edward S. Howe, was reversed.

The condition in the several deeds alleged to have been broken was, in substance, that the land exclusive of that portion thereof, which was laid out as a public street, should be "improved, dedicated and forever used as a common park or boulevard, and for no other purpose." The alleged breach consisted in the city having established its driven-well plant on this boulevard land, a portion of which consisting of wells driven beneath the surface and pipes under the surface, extended into each parcel of the land in dispute. The Court held that the establishment of this 'plant and maintain-

ing the same under the surface of the ground was not inconsistent with the use prescribed by the condition. On the premises of the plaintiff Howe, however, the city had located its pumping station above the ground and this use was regarded as a breach of the condition in the deed from Howe to the city, and this case was sent back to the Superior Court for a trial on the question of what, if any, allowance was to be made to the defendant for improvements placed upon the land, and what sum, if any, should be paid by the city to the plaintiff for rents and profits. As to all of the cases, therefore, except that of Howe, a judgment has been rendered for the defendant, and the Howe case is still pending on the question above stated. It is probable that a satisfactory and equitable settlement of these questions will be effected and further litigation avoided. In view of the importance to the city of these cases, and the adverse decision of the Superior Court thereon, the decision of the Supreme Judicial Court is most gratifying.

2884. *James C. Donovan vs. City of Lowell.*

2885. *Edmund Burke vs. City of Lowell.*

The above cases, which were tried together at the March sitting of the Superior Court in 1898, and

fully reported in my last annual report on page 31, are still pending in the Supreme Judicial Court on exception.

495. (Equity) *James G. Butrick, et al. vs. City of Lowell, et al.*

In the above case, which was fully reported in my last annual report, and which was an application for an injunction to prevent the payment by the City of Lowell, of certain bills incurred under a joint order of the City Council for the entertainment of members of the City Council of Lawrence and others, at Lakeview, the injunction has been made permanent.

1761. *Margaret Ford vs. Henry Quinn, et al.*

1858. *Lawrence Ford vs. George R. Davis, et al.*

These are actions of tort brought against certain officers of the police force for an alleged illegal arrest and false imprisonment. The cases were called for trial at the March sitting of the Superior Court in 1898, and resulted in a verdict for the defendants in both cases. The case of Margaret Ford against Henry Quinn et al., was carried to the Supreme Judicial Court on exceptions by the plaintiff. The case was submitted to the Court on

briefs and a rescript has been received, "Exceptions overruled."

129. *William Manning vs. City of Lowell.*

This was a petition filed in the Superior Court to recover damages for the taking, by the city, of about one hundred and thirty-three thousand six hundred and six square feet of land for the enlargement of the Edson Cemetery, a public burial ground in said city, as shown by the report of the City Solicitor for the year 1894. The case was tried at the March term of the Superior Court of the year 1893. The jury returned as the petitioner's damages the sum of four thousand three hundred and eighty dollars. The petitioner filed his bill of exceptions which were pending in the Sureme Judicial Court when I assumed the office of City Solicitor. The exceptions were argued by me, in December last, and a rescript has been received overruling the exceptions.

772. *John H. Harrington, Collector of Taxes, vs. J. W. C. Pickering.*

773. *John H. Harrington, Collector of Taxes, vs. Chas. J. Glidden.*

774. *John H. Harrington, Collector of Taxes, vs.
Chas. E. Adams.*
775. *John H. Harrington, Collector of Taxes, vs.
Francis Jewett.*
776. *John H. Harrington, Collector of Taxes, vs.
James W. Bennett.*
777. *John H. Harrington, Collector of Taxes, vs.
Levi Sprague.*
778. *John H. Harrington, Collector of Taxes, vs.
Asa C. Russell.*

The seven last preceeding cases are actions of contract, brought in the name of John H. Harrington, then collector of taxes, against the respective defendants, to recover for the City of Lowell, certain taxes assessed against them as Trustees of the Erie Telephone and Telegraph Company. The actions were brought by my predecessor in office.

The case against Chas. E. Adams was continued because of the fact that the defendant, Adams, had previously brought his petition for an abatement of said taxes, which was heard before the County Commissioners, who entered a decree dismissing the petitions, and the petitioner had applied to the Supreme Judicial Court for a writ of certiorari to

revise the proceedings of said County Commissioners, which petition was still pending. The other cases were tried in the Superior Court, in December last, before a jury, who returned a verdict for the city in each case of four thousand two hundred and twenty-nine dollars and ninety-two cents, aggregating twenty five thousand three hundred and seventy-seven dollars and fifty-two cents. The cases were tried together and defendants' counsel alleged exceptions in each case, which exceptions are now pending in the Supreme Judicial Court.

1093. (U. S. Dist. Court, Equity) *Chandler Adjustable Chair and Desk Co. vs. City of Lowell.*

11144. (Law, Suffolk Co.) *Chandler Adjustable Chair and Desk Co. vs. City of Lowell.*

The first of the two last mentioned cases was a bill in equity in the United States Circuit Court to restrain the defendant by injunction from using certain school furniture purchased some two years ago from one Gabriel A. Bobrick, the claim being that the purchase and use of said furniture was an infringement of certain letters patent of the United States of which the plaintiff was the owner, to wit: —

United States patent to Roulstone, No. 505,557,

and for damages for such infringement. Prior to the purchase by the city of said furniture, the agent for the plaintiff, who was a competitive bidder for the contract for furnishing said furniture to the city, claimed that the city had no right to purchase said furniture from said Bobrick, who was the lowest bidder, and that the manufacture and sale by said Bobrick of such furniture was an infringement of said letters patent; in consequence of such representations the city at the time of the purchase from Bobrick took a bond with sureties to indemnify the city from any possible loss by reason of an infringement suit. No suit was then brought, and nothing further was heard of the infringement claim until in 1898, the city advertised for bids for furnishing certain other school furniture needed and the plaintiff in this action was a competitive bidder together with the Hayward Brothers and Wakefield Company, who claimed to be manufacturing and selling furniture under the Bobrick patents, when the claim of infringement was revived and a suit threatened, unless the plaintiff secured the contract, and before the contract was awarded this suit was actually brought. The contract was awarded to said Chandler Adjustable Chair and Desk Co. The Mayor and the then Chief of the Supply Department asserted that it was understood and agreed at the time such contract was awarded

that the suit should be dismissed without expense to the city, as a part of the consideration for such purchase. The goods called for by the last mentioned contract were delivered to the city and accepted, but the plaintiff refused to dismiss the action and denied that an agreement so to do was made. The Mayor thereupon refused to sign a draft for the payment of the goods purchased in said last mentioned contract and the second of the two last above named actions was brought to recover the same. I notified the sureties on Bobrick's bond of the pendency of said infringement suit and requested them to come in and defend the same, and said bondsmen employed the firm of Crosby & Gregory and Frederick L. Emery, Esq., patent attorneys, to defend said suit without expense to the city. An answer was made in this suit and also in the common law case, above mentioned, and considerable evidence was taken. An agreement, however, was finally reached by which the bill in said infringement suit was dismissed and judgment allowed to be entered in the Superior Court in Suffolk County, for the amount due to the plaintiff, on their contract above mentioned, thus disposing of both of said actions.

4877. *John T. Vincent vs. City of Lowell.*

4878. *Lawrence Mfg. Co. vs. City of Lowell.*

The two last named cases were petitions for a jury to assess damages for land taken by the city in extending Aiken Street.

In the first case, the city awarded the petitioner the sum of \$8,977.46 and in the second case the petitioner was awarded the sum of \$12,045.18. Both actions were entered in Court on the first Monday of February, 1899. Afterwards, however, the parties decided to accept the awards made by the city, and the petitions were dismissed.

4880. *Lois R. Frothingham vs. City of Lowell.*

This is a petition for a jury to assess the damages sustained by the petitioner, by the extension of Oliver and Claire Streets, through a lot of land owned by her situated on Wannalancit Street. The city awarded the petitioner, for her land taken and other damages, the sum of \$995.40, which the plaintiff claims is insufficient.

4973. *Horace B. Coburn, et al. vs. City of Lowell.*

This is a petition to the Supreme Court for a jury to assess the damages for the land taken and

injury to plaintiff's remaining land by the decree of the County Commissioners in the widening of Andover Street. The petition was filed January 17, 1899, and an order of notice issued thereon, returnable on the first Monday of March, next.

4046. *Tremont and Suffolk Mills vs. City of Lowell.*

4047. *Tremont and Suffolk Mills vs. City of Lowell.*

4048. *Tremont and Suffolk Mills vs. City of Lowell.*

The three last cases are petitions to the Superior Court, under Chapter 127 of the Acts of 1890, in the nature of appeals from decisions of the Board of Assessors of the city, refusing to abate a portion of the tax assessed against the petitioner for the years 1895, 1896 and 1897 respectively. Each of these petitions constitutes a separate case and is to be tried separately.

The trial of No. 4048, which involves the assessment of 1897, was commenced before Arthur Lord, a commissioner appointed by the Superior Court, January 25th of the present year, and the hearing will doubtless occupy several weeks. It is not possible to state definitely the amount involved in either of these cases, as the petitions merely state that the corporation "is taxed at more than its just proportion and is aggrieved, and that the tax is excessive, unequal,

illegal and upon an assessment of some or all of its property above its fair cash value, and that it should be abated."

The Assessors' valuation of the property, for the year 1897, is as follows:

Machinery	\$1,016,730
Mill buildings, etc.	602,000
Land in mill yards and water-power	274,755
Land and buildings outside of yards,	304,125
<hr/>	
Total	\$2,197,610

Mr. Covell, in his testimony, gives as his judgment of the total value of all the property of the Tremont and Suffolk Mills, subject to local taxation, \$1,451,008, which is \$746,602 less than the Assessors' valuation for the year 1897.

The return made by the Tremont and Suffolk Mills to the tax commissioner, as of May 1, 1897, gives the value of this property at \$1,951,070. The value of the real estate and machinery according to the return of the tax commissioner is, therefore, \$499,468 higher than the valuation placed on the same property by Mr. Covell in his testimony, and \$246,540 lower than the Assessors' valuation.

The object of the corporation in seeking these abatements appears to be to establish a theory of valuation for textile manufacturing property different

from that which has hitherto prevailed. The corporation contends that the land, buildings and machinery should be taxed as a unit, and that a correct way of arriving at its value would be to ascertain what an ideal plant, capable of producing the same product, could be constructed for, then ascertain what the saving in the cost of production in the ideal plant would be over the existing plant, capitalize this saving at ten per cent. and deduct the sum so obtained from the first cost of the plant, then depreciate that balance for age, deterioration, etc., and the remainder will be the value of the plant for assessment purposes.

It is to be greatly regretted that these cases cannot be properly tried without involving a very large and apparently disproportionate expense to the city. The issues are of such a nature that we are obliged to depend almost wholly upon the testimony of experts to establish the facts. It is difficult to find mill, mechanical and hydraulic engineers whose experience and reputation are such as to make them valuable as witnesses, who are not in some manner interested for or identified with the manufacturing corporations of New England. Of course, persons, however expert, who are thus interested, are not to be thought of as witnesses for the city. Ordinarily they would refuse to testify against the corporations, and even if they

did not refuse we should not be willing to rest our case upon the testimony of persons prejudiced in favor of our opponents. The field from which experts can be selected in these cases on behalf of the city is, therefore, very limited, and the compensation which we are compelled to pay is correspondingly large. Moreover, a good deal of time must necessarily be spent by the city's experts, most of whom are unfamiliar with the property, in examining it, making inventories and measurements and securing data to enable them to testify intelligently. This unhappy controversy between the manufacturing corporations and the municipality is to be deplored; for the city is always placed in the position where it must yield to whatever demands the corporation may choose to make in the way of abatement, or expend in litigation a sum perhaps equal to or exceeding the abatement claimed. I cannot help thinking that the demands of the manufacturing corporations for abatement of their taxes are due in part to the depression in the cotton industry which has existed for several years past, and which now appears to have passed by. It is certainly to be hoped that with the return of prosperity the relations between the municipality and the corporations will be more harmonious. Any serious controversy between them must certainly be injurious to both.

I trust also that the tax litigation now going on in Lowell, Holyoke and other cities will result in the devising of some plan by which such questions, when they arise in the future, may be settled in a simpler and less expensive manner.

In the following pending cases no changes have been made since my last report.

67. *Charles E. Adams vs. City of Lowell.*
3653. *Sarah Morris vs. City of Lowell.*
3548. *Charles J. Wigren vs. Fred O. J. Townsend.*
3549. *Lawrence Ford vs. John McManus et als.*
John M. Pevey et als. vs. City of Lowell.
1208. *Celeste A. Butcher vs. City of Lowell.*
1214. *George W. McIntire vs. City of Lowell.*
1281. *Daniel Gage vs. City of Lowell.*
1282. *Daniel Gage vs. City of Lowell.*
1283. *Artemus B. Woodworth vs. City of Lowell.*
1280. *Lowell Waste Company vs. City of Lowell.*
1593. *Middlesex Company vs. City of Lowell.*

1511. *Joseph B. Varnum vs. City of Lowell.*
1596. *John Doherty vs. City of Lowell.*
1599. *Robert H. Mulno vs. City of Lowell.*
1600. *Benjamin Scholefield et al. vs. City of Lowell.*
208. *Hugh McCormack vs. Albert Pindar.*
916. *Mary O'Connell vs. City of Lowell.*
917. *Abbe A. Moore vs. City of Lowell.*
80. *Joseph Small vs. City of Lowell.*
181. *Warren Aldrich et al. vs. City of Lowell.*
182. *Henry L. Tibbetts vs. City of Lowell.*
436. *Patrick Lynch vs. City of Lowell.*
- 372 $\frac{1}{2}$. *D. Maria Parker vs. City of Lowell.*
270. *James Leonard vs. City of Lowell.*
117. *D. Moody Prescott vs. City Lowell.*
1140. *William E. Livingston vs. City of Lowell.*
3032. *Bragg Mfg. Co. vs. City of Lowell.*
470. *Municipal Signal Co. vs. City of Lowell.*

GRADE CROSSINGS.

By a decree of the Superior Court, in the County of Middlesex, filed in said Court August 1, 1895, the decision of George W. Wiggin, John W. Ellis and Samuel L. Minot, commissioners appointed by said Superior Court, on the petition of the Mayor and Aldermen of the City of Lowell, for an alteration in the grade crossing of George Street, Church Street, Taylor Street, and Lawrence Street was confirmed. By said decree only one of the grade crossings mentioned in said petition was altered. That was one of the Lawrence Street crossings. The decree required that the Boston and Maine Railroad do all the work and furnish all the material required in making the change, and decided that the Commonwealth should pay 25 per cent. of the whole cost of the alteration, the City of Lowell 10 per cent. and the Boston and Maine Railroad 65 per cent.

In pursuance of this decree the work was completed by the Boston and Maine Railroad, and the only sum paid directly by the city was the sum of \$800.00 paid to John F. Frye for land damages. During the past year the bills for the expense of this grade crossing have been audited by P. H. Cooney, Esq., an auditor appointed by the Superior Court under the statute, and a decree entered in the Superior Court upon said auditor's

report. It was found that the total cost of said improvement was \$21,091.47, of which the City of Lowell's proportionate part was \$2,109.15. As the city had paid out but \$800.00 the decree required it to pay to the Boston and Maine Railroad the further sum of \$1,309.15, but by the provisions of Chapter 283 of the Acts of 1893 the Court is authorized to require in such cases the Commonwealth to pay to the city or town the entire sum which said city or town is called upon to pay as its proportion of the expense of altering the grade crossing, which sum is to be afterwards repaid to the Commonwealth in installments to be included in the annual State tax of such city or town, until the whole is paid, with interest at 4 per cent. Accordingly, under said last mentioned decree, filed October 13, 1898, the Commonwealth paid to the City of Lowell said sum of \$2,109.15, which sum will have to be reimbursed to the Commonwealth in the manner above stated. By a decree of the Superior Court, filed May 24, 1895, the decision of the same commissioners appointed on the petition of the Mayor and Aldermen of the City of Lowell, for an alteration in the grade crossing of Pawtucket Street was confirmed.

The decision of the commissioners in this case required the separation of the grades, the relocating of a portion of Pawtucket Street, the discontinuance

of a portion of said street, and the building of a bridge over the tracks of said railway. The decision also required the Boston and Maine Railroad to "do all the work and furnish all the material required in the construction of said bridge, including the abutments and near walls, and do all the work and furnish all the material required in the alteration of the grade of said railroad, and that the City of Lowell shall do all the rest of the work and furnish all the rest of the material required by this decision."

In pursuance of this decree the work of separating the grades in accordance with the plan of the commissioners has been completed, and during the year the bills of the Boston and Maine Railroad and the City of Lowell have been audited by P. H. Cooney, Esq., auditor appointed by said Court, who made his report to the Court, and on the 13th day of October, 1898, a decree was entered in accordance with said report. It appears by said decree that the amount of expenses incurred and bills paid in making the required alteration was \$71,688.84, of which the Boston and Maine Railroad had expended the sum of \$45,716.24 and the City of Lowell had expended the sum of \$25,972.60; that the amount of said total cost, which the Boston and Maine Railroad ought to pay as its proportion was \$46,597.75; the amount which the

City of Lowell was required to pay as its proportion was \$7,168.88, and the amount which the Commonwealth ought to pay as its proportion was \$17,922.21. The decree, therefore, required the Boston and Maine Railroad to pay to the City of Lowell the sum of \$881.51, and the Commonwealth to pay to the City of Lowell the total sum of \$25,091.09, of which sum the City of Lowell is required to reimburse to the Commonwealth in annual installments to be included in its State tax the sum of \$7,168.88, and all the payments required by said decree have been made.

The decree in the last named case is not a final decree, as there are certain suits pending against the City of Lowell for land damages resulting from the change of the grade crossing at Pawtucket Street, and after these damages have been determined by a jury, another hearing before the auditor will take place and a final decree be made.

There have been during the past year the usual number of opinions given on a great variety of questions that have arisen in the administration of our municipal affairs; and a large number of contracts have been made and several titles examined at the registry of deeds and elsewhere. A number

of consultations have been had with officials of the Boston and Maine Railroad, growing out of various contracts between the Boston and Lowell Railroad and the City of Lowell, and the different plans and suggestions that have from time to time been proposed with respect to the rebuilding of of Huntington and Jackson Halls.

Respectfully submitted,

(SIGNED)

FRANCIS W. QUA,

City Solicitor.

ANNUAL REPORT
OF THE
Superintendent of City Scales
AND
MEASURER OF WOOD AND BARK
OF THE
CITY OF LOWELL, MASS.

FOR THE YEAR 1898.



LOWELL, MASS.:
MORNING MAIL CO., PRINTERS.
1899.

REPORT.

To the Honorable Mayor and Board of Aldermen :

In compliance with an ordinance requiring the Superintendent of City Scales to report annually, I have the honor to submit the following report for the year 1898.

I have during the year weighed :

	TONS	POUNDS
613 loads of hay.....	708	545
126 “ paper.....	106	240
94 “ oats.....	106	60
80 “ coal.....	152	900
41 “ straw.....	37	1805
19 “ meal.....	12	1150
12 “ iron.....	12	1413
20 “ shorts	3	1635
10 “ furniture.....	7	10
8 “ salt.....	5	1505
6 “ corn.....	3	1530
3 “ carrots.....	4	920
3 “ beef	1	420
2 “ sand.....	2	1790
2 “ wheat.....		1170
1 “ feed.....	1	815

	TONS	POUNDS
1 load of pigs.....	1	10
1 " gravel.....	1	55
1 " potatoes.....		175½
1 " provender.....		615
1 " middlings.....		500
1 " seed.....		25
60 horses.		
14 wagons.		

Received for fees for weighing, \$164.21.

GEORGE F. NOONAN,
Superintendent of City Scales.

Report of the Measurer of Wood and Bark

FOR THE YEAR 1898.

I have during the year measured:

	CORDS	FEET
2096 loads of wood.....	2601	4 3-4
40 " manure.....	30	7 1-4
1 " crushed stone.....		39 3-16
3 wagons.		

Received for fees for measuring, \$106.05.

GEORGE F. NOONAN,
Measurer.

ANNUAL REPORT
OF THE
Sealer of Weights and Measures
OF THE
CITY OF LOWELL
FOR THE YEAR 1898.



LOWELL, MASS.
MORNING MAIL COMPANY, PRINTERS.
1899.

REPORT.

LOWELL, MASS., Dec. 29, 1898.

*To the Honorable Mayor and Board of Aldermen of
the City of Lowell:*

GENTLEMEN : — I hereby submit my annual report
as Sealer of Weights and Measures for the year
1898.

I have sealed

51	Hay or coal scales, at \$1.00 each.....	\$51 00
350	Portable scales, at 50 cents each.....	175 00
31	Platform counter scales, at 50 cents each.....	15 50
140	Platform counter scales, at 25 cents each.....	35 00
870	Counter scales, at 3 cents each.....	26 10
72	Dry measures at 3 cents each.....	2 16
8	Wet measures, at 3 cents each.....	24
30	Wet Measures, at 3 cents each.....	90
4582	Weights, at 3 cents each.....	137 46
		<hr/>
		\$443 36

Also the following for which no fee was charged:

10	Platform counter scales (large size), at 50 cents each.	
1	Platform counter scale (small size), at 25 cents each.	
	Wet measures for H. H. Wilder & Co.....	37
	“ “ “ “ “	24
	“ “ “ “ “	36
	“ “ “ “ “	1
	“ “ “ G. K. Upton.....	1
	“ “ “ J. W. Parods.....	2
	Weights	150

I enclose herewith an itemized account of all transactions made by this department to date.

Yours respectfully,

N. E. ANNIS.

LIST OF JURORS

FOR THE

CITY OF LOWELL,

FOR THE YEAR 1899.



LOWELL, MASS.:
1899.

LIST OF JURORS.

A

ABBOTT, HENRY F.....	278	Branch st.....	dealer
ABBOTT, JOHN W.....	18	Fremont st.....	tinsmith
ABELS, SAMSON	43	Nicollet st.....	merchant
ADAMS, EDWARD E.....	84	Middlesex st.....	music teacher
ADAMS, ENOS H.....	332	E. Merrimack st.....	shoe dealer
ADAMS, MITCHELL.....	8	Loring st.....	overseer
ADAMS, THEODORE	203	Westford st.....	janitor
AHLBERG, CARL A.....	70	Andrews st.....	machinist
ALDRICH, DANIEL W.....	44	So. Loring st.....	shoe maker
ALLEN, THOMAS O.....	947	Middlesex st.....	inspector of milk
ANDERSON, JAMES	27	Alder st.....	gentleman
ARNOLD, WILLIAM A.....	75	Fremont st.....	clerk
ASHWORTH, GEORGE L.....	33	Rock st.....	file cutter
ATKINSON, SAMPSON B.....	68	E. Merrimack st.....	tea dealer

B

BAGLEY, CHARLES N.....	6	Carter st.....	overseer
BAGSHAW, WALTER H.....	11	Wilson st.....	manufacturer
BAILEY, FREDERICK	142	First st.....	druggist
BAILEY, HARRY L.....	110	Bartlett st.....	clerk
BAKER, E. GARFIELD.....	5	Fletcher st.....	builder
BAKER, FREDERICK W.....	136	Myrtle st.....	machinist

B

BALDWIN, EDWIN K.....	92 Holyrood av.....	bookkeeper
BALDWIN, JOHN D. S.....	534 Merrimack st.....	moulder
BARCLAY, OSCAR R.....	162 Smith st.....	carpenter
BARKER, JOSEPH S.....	538 Chelmsford st.....	machinist
BARNARD, VIRGIL G.....	68 Harvard st.....	clerk
BARNES, HENRY W.....	30 Huntington st.....	tailor
BARRETT, EDWARD J.....	37 Arlington st.....	merchant
BARROWS, JOHN J.....	11 London st.....	weaver
BARRY, PATRICK H.....	3 Lagrange st.....	driver
BARTLETT, WALTER E.....	523 Fletcher st.....	clerk
BARTON, CYRUS	78 So. Walker st.....	contractor
BASTOW, ALBERT.....	220 Thorndike st.....	overseer
BATEMAN, JOHN F.....	5 Stevens st.....	surveyor
BEALS, GEORGE M.....	511 Bridge st.....	harness maker
BEALS, HORACE P.....	84 Marlborough st.....	lumber dealer
BELL, FRANK A.....	366 Worthen st.....	machinist
BELL, GEORGE E.....	434 Worthen st.....	overseer
BENNETT, FRED W.....	475 Wilder st.....	roofer
BENNETT, GEORGE A.....	51 Marshall st.....	roofer
BENNETT, JOHN C.....	45 Walker st.....	merchant
BERTAND, ARTHUR M.....	18 C st.....	tailor
BIGGS, JOHN	45 Nichols st.....	carpenter
BILL, FREEMAN M.....	30 West Sixth st.....	grocer
BILLS, GEORGE F.....	46 Old Meadow road.....	painter
BISHOP, HERBERT L.....	28 May st.....	clerk
BIXBY, ALBERT J.....	80 D st.....	overseer
BIXBY, NEWTON M.....	63 Bridge st.....	operative
BLAKE, BENJAMIN M.....	124 Shaw st.....	dealer
BLANCHARD, CHARLES F....	49 Arlington st.....	druggist
BLESSINGTON, JOHN B.....	426 Central st.....	foreman street dept.
BLODGETT, EMERY F.....	37 Midland st.....	bookkeeper
BLOOD, JOHN C.....	13 Durant st.....	railroad
BOARDMAN, WILLIAM W....	11-12 Mer'k corp...	boarding ho. keeper
BOISVERT, CHARLES H.....	94 Lilley av.....	baker
BOLTON, THOMAS M.....	100 Mt. Washington st...	harness maker

B

BOOTH, ROBERT	353	Walker st.....	overseer
BOSCA, ANADORE B.....	15	Prescott corp.....	overseer
BOUTWELL, ROSWELL M....	33	Wannalancit st.....	merchant
BOWEN, ALLYN G.....	10	Runel's block.....	clerk
BOWEN, GEORGE F.....	68	Worthen st.....	yard master
BOWEN, WILFORD G.....	10	Runels' ct.....	clerk
BOWERS, FRANK D.....	45	Marion st.....	painter
BOYLE, EDWARD D.....	41	State st.....	printer
BOYLE, JOHN F.....	32	Whipple st.....	clerk
BOYLE, JOHN L.....	110	Congress st.....	machinist
BOYLE, THOMAS H.....	42	Seventh st.....	liquor dealer
BOYERS, JOHN	12	Albion st.....	loom fixer
BRACKETT, ALBERT W.....	71	Middlesex st.....	overseer
BRADY, PETER F.....	320	Fletcher st.....	painter
BRADLEY, EDWARD	62	Hudson st.....	laborer
BRADT, DAVID H.....	125	Mt. Vernon st.....	baker
BRADT, GERRITT J.....	523	Fletcher st.....	baker
BRAZER, RALPH F.....	46	Fairmount st.....	merchant
BRENNAN, JOHN J.....	196	Concord st.....	butcher
BRIGHAM, CHARLES W.....	488	Middlesex st.....	tanner
BROCK GREENLIEF C.....	118	First st.....	druggist
BROTHERS, GEORGE W.....	60	Royal st.....	clerk
BROWN, ALDEN P.....	13	Robert st.....	machinist
BROWN, BENJAMIN G.....	182	Westford st.....	contractor
BROWN, JOHN A.....	18	Bourne st.....	janitor
BROWN, PHILIP P.....	59	Second av.....	coal dealer
BROWN, WILLIAM D.....	9	Simpson st.....	real estate
BROWN, WILLIAM H.....	290	Westford st.....	grocer
BROWN, WILLIAM H.....	67	Bartlett st.....	teamster
BRUIN, MICHAEL J.....	67	Worthen st.....	clerk
BUCKLEY, GEORGE	190	High st.....	motorman
LUGBEE, CHARLES A.....	62	Grove st.....	painter
BULKLEY, S. FRANK.....	764	Broadway.....	painter
BURBANK, SAMUEL	72	Fort Hill av.....	clerk
BURBANK, WILLIS P.....	207	Appleton st.....	insurance agent

B

BURBECK, FREDERICK A...	20 Middlesex st.....	clerk
BURKE, EDWARD N.....	216 Nesmith st.....	superintendent
BURNHAM, CRAWFORD.....	553 Fletcher st.....	lumber dealer
BURNS, EDWARD	154 Concord st.....	wool sorter
BURNS, GEORGE E.....	25 Eighteenth st.....	clerk
BURNS, JOSEPH F.....	68 Smith st.....	clerk
BURNS, MALACHI	84 Pleasant st.....	gentleman
BURRAGE, HAMILTON	856 Gorham st.....	paymaster
BURRILL, JOHN F.....	612 Beacon st.....	clerk
BURTT, ARTHUR M.....	145 Beacon st.....	architect
BUTLER, FRANK E.....	130½ Colburn st.....	pattern maker
BUTLER, WILLIAM	176 Broadway.....	laborer
BUTTERFIELD, ARTHUR D.	84 Forrest st.....	printer
BYAM, SUMNER A.....	185 Foster st.....	clerk

C

CADDELL, PETER	17 Caddell av. Crescent st....	carpenter
CADDELL, WILLIAM	557 Chelmsford st.....	shipper
CADY, GEORGE L.....	163 Summer st.....	manufacturer
CADY, HARRY F.....	82 Grand st.....	real estate
CALDERWOOD, WILLIAM ...	434 High st.....	cigars and tobacco
CAMPBELL, GEORGE	71 Agawam st.....	grocer
CAMPBELL, JAMES L.....	83 Queen st.....	gentleman
CARLE, ASA B.....	40 Second st.....	carpenter
CARPENTER. W IRVING....	28 So. Whipple st.....	dealer
CARRIGG, JOHN J.....	10 Lakeview av.....	clerk
CARSON, GEORGE	Middlesex yard.....	watchman
CARTER, JOHN T.....	97 Hastings st.....	cabinet maker
CARTER, JOHN W.....	63 Jenness st.....	cabinet maker
CASEY, GEORGE W.....	45 Willow st.....	tanner
CASSIDY, JAMES W.....	4 Fifth av.....	gentleman
CAVANAUGH, SIMON A.....	98 Andover st.....	salesman
CAWLEY EDWARD	89 Rogers st.....	coal dealer

C

CHADWICK, ALFRED M.....	87	Fort Hill av.....	paymaster
CHADWICK, AUSTIN K.....	444	Andover st.....	treasurer
CHALIFOUX, JOSEPH L.....	377	Wilder st.....	merchant
CHANDLER, JOHN A.....	31	Middlesex Park.....	watchman
CHARTERS, REUBEN P.....	112	Congress st.....	watchman
CHARTERS, WILLIAM A.....	113	Lawrence st.....	board. ho. keeper
CHASE, GEORGE A.....	36	Canton st.....	superintendent
CHASE, GEORGE A.....	205	Fairmount st.....	gentleman
CHASE, GEORGE W.....	19	Lincoln st.....	contractor
CHASE, HOWARD E.....	124	Chapel st.....	mechanic
CHEEVER, DAVID K.....	285	Westford st.....	dealer
CHENEY, EDWARDS	53	Chelmsford st.....	clerk
CHURCHILL, LUDLOW D.....	214	Third st.....	clerk
CLARK, ARTHUR L.....	251	E. Merrimack st.....	grocer
CLARK, AVERY B.....	33	Anne st.....	superintendent
CLARK, CORNELIUS E.....	228	High st.....	machinist
CLARK, FRANK S.....	60	Chapel st.....	agent
CLARK, LUKE H.....	162	Avon st.....	grocer
CLARK, MARION S.....	84	Lane st.....	cashier
CLARK, T. FRANK.....	33	Davidson st.....	collector
CLAY, HENRY	334	Moody st.....	box maker
CLAY, MILO D.....	411	School st.....	painter
CLEARY, DANIEL	47	Swift st.....	plasterer
CLEE, JOHN E.....	235	Plain st.....	operative
CLEMENT, DANIEL W.....	514	School st.....	dealer
CLEMENT, GEORGE E.....	8	Dodge st.....	carpenter
CLEMENT, GEORGE W.....	23	Emery st.....	clerk
CLEWORTH, WALTER	75	Huntington st.....	printer
CLIFFORD, CHARLES T.....	99	Westford st.....	dentist
CLIFFORD, EVERETT A.....	20	Lane st.....	clerk
CLUER, ARTHUR H.....	3	Wachusett st.....	harness maker
CLUIN, JOHN J.....	130	Fort Hill av.....	jeweler
CLUNE, PETER A.....	561	Central st.....	barber
COBB, FRANK	20	Starbird st.....	painter
COBB, THADDEUS S.....	25	Ware st.....	machinery dealer

C

COBURN, ALONZO A.....	70 Rolfe st.....	manufacturer
COBURN, ARTHUR C.....	E. S. Humphrey st.....	clerk
COBURN, CHARLES H.....	793 Merrimack st.....	merchant
COBURN, CLARENCE G.....	215 Mammoth road.....	grocer
COBURN, FRANK A. P.....	759 Stevens st.....	farmer
COBURN, HARRY W.....	56 Sixth st.....	dentist
COBURN, LAURENS W.....	204 Cross st.....	clerk
COBURN, WALTER	14 Wannalancit st.....	waste m'f'g'r
COFFEY, MICHAEL F.....	194 Middlesex st.....	real estate
COFFIN, ABRAM	712 Suffolk st.....	carpenter
COLEMAN, PATRICK	139 Colburn st.....	board. ho. keeper
COLLINS, DANIEL	39 Lyon st.....	laborer
COLLINS, JAMES HENRY....	417 Bridge st.....	liquor dealer
COLLINS, PATRICK H.....	237 Broadway.....	moulder
COLVIN, GEORGE	456 Central st.....	gentleman
CONANT, FREDERICK	643 Westford st.....	manager
CONANT, GEORGE W.....	176 Cross st.....	electro-mechanic
CONDON, JOHN H.....	27 Cady st.....	janitor
CONLEY, JOHN F.....	30 Davidson st.....	plumber
CONLEY, MARTIN F.....	49 Church st.....	barber
CONNELL, RICHARD, J.....	rear 28 Walnut st.....	printer
CONNERS, PHILIP P.....	43 Short st.....	merchant
CONNOLLY MICHAEL J.....	47 Fifth st.....	clerk
CONNOR, BERNARD A.....	13 Wiggin pl.....	laborer
CONNORS, THOMAS J.....	5 Franklin ct., Adams st.....	laborer
CONSTANTINEAU, CYRILLE	81 Fourth av.....	real estate
CONWAY, ANTHONY A.....	88 Pleasant st.....	overseer
CONWAY, AUSTIN F.....	85 West Fourth st.....	laborer
COOKE, ALFRED	20 West Sixth st.....	clerk
COOKE, WILLIAM E.....	20 West Sixth st.....	merchant
COOLIDGE, FRANKLIN S,....	148 Methuen st.....	real estate
COONEY, NICHOLAS	50 Walnut st.....	engineer
CORBETT, MICHAEL	32 Highland st.....	dealer
CORLISS, AMMI L.....	9 Methuen st.....	machinist
CORSON, FRED B.....	506 E. Merrimack st.....	barber

C

COSTELLO, JAMES E.....	27	Abbott st.....	steam fitter
COTE, FRANCOIS M.....	139	Cushing st.....	painter
COUGHLIN, JEREMIAH	359	Concord st.....	gardener
COX, JOHN B.....	39	Summer st.....	machinist
COX, SIMON	71	Church st.....	shoe maker
CRAIG, JOSEPH	30	Congress av.....	B. & M. R. R.
CRAWFORD, JOHN W.....	155	Westford st.....	clerk
CRIMMIN, PATRICK	30	Marion st.....	clerk
CROOKER, ABEL F.....	30	Nichols st.....	painter
CROWELL, ALBERT	378	Rogers st.....	druggist
CROWELL, CORNELIUS F....	38	Suffolk st.....	laborer
CROWLEY, DENNIS J.....	112	Walker st.....	clerk
CROWLEY, JOHN F.....	18	Abbott st.....	bartender
CROWLEY, PATRICK H.....	38	Suffolk st.....	laborer
CROWN, GEORGE W.....	108	Livingston av.....	machinist
CUFF, JOHN H.....	18	Agawam st.....	shuttle maker
CUMMINGS, FRANK G.....	187	Varnum av.....	boxmaker
CUMMISKEY, JOHN J.....	14	Whipple st.....	watchman
CUNNINGHAM, ANTHONY J. rear	229	Adams st.....	mule spinner
CURRY, JAMES H.....	105	Tremont st.....	steam fitter
CURTICE, BYRON F.....	2	Massasoit st.....	car inspector
CURTIS CHARLES E.....	433	Central st.....	machinist
CUSTY, PATRICK J.....	96	Mt Washington st.....	tinsmith
CUTLER, ARTHUR S.....	124	Delaware av.....	architect
CUTLER, JOHN S.....	772	Varnum av.....	barber

D

DAILEY, JOHN J.....	159	Chapel st.....	operative
DALLAGHER, JOSEPH H.....	41	Bridge st.....	operative
DALY, FRANK W. S.....	66	Grand st.....	clerk
DANA, CLARENCE W.....	459	Dutton st.....	machinist
DANA, WILLIAM H.....	170	Holyrood av.....	retired

D

DANA, WILLIAM H jr.....	230	Cabot st.....	overseer
DANAHY, JOHN J.....	22	Crowley st.....	tinsmith
DANE, GEORGE F.....	53	Oakland st.....	B. & M. R. R.
DANIELS, JOHN S.....	558	Chelmsford st.....	farmer
DAVID, PHILEAS, jr.....	497	Moody st.....	painter
DAVIS, CHARLES O.....	14	Edson st.....	lumber dealer
DAVIS, NATT A.....	80	Howard st.....	clerk
DAVIS, WILLIAM L.....	54	Grove st.....	dealer
DAWSON, JAMES	84	So. Whipple st.....	paper hanger
DAWSON, JOSEPH E.....	3	Front st.....	plumber
DEAN, SIMON	516	Lawrence st.....	clerk
DEARBORN, CHARLES O.....	31	Bazelay st.....	clerk
DELANEY, JOHN J.....	17	Cady st.....	tailor
DELANEY, THOMAS	791	Broadway.....	tailor
DELANEY, WILLIAM B.....	73	Lawrence st.....	tailor
DELEHANTY, THOMAS F.....	129	Tremont st.....	mule spinner
DELMAGE, WILLIAM A.....	48	Fourth st.....	janitor
DENNETT, ALVANUS M.....	57	Fourth st.....	pawn broker
DENNING, LEVI	171	Mt. Hope st.....	grocer
DENNIS, EDWARD P.....	50	Chelmsford st.....	superintendent
DESMOND, JOHN H.....	110	Powell st.....	operative
DEVINE, PHILIP	61	Chapel st.....	moulder
DEVOLL, ANDREW J.....	53	Thirteenth st.....	salesman
DEXTRA, JOSEPH	534	Merrimack st.....	barber
DICKINSON, WATSON A.....	190	Branch st.....	manufacturer
DILWORTH, DENNIS	44	Merrill st	overseer
DIMON, CHARLES A. R.....	223	Parkview av.....	agent
DOBBINS, RICHARD	119	Liberty st.....	boiler maker
DODGE, EDWARD P.....	39	Washington st.....	carpenter
DOHERTY, HENRY P.....	93	Adams st.....	painter
DOHERTY, JOHN J.....	20	Mill st.....	mattress maker
DONAHUE, CORNELIUS F.....	61	Pine Hill st.....	clerk
DONOHUE, DENNIS	16	Merrill st.....	machinist
DONOHUE, MICHAEL F.....	355	Worthen st.....	machinist
DOUGLASS, HARRY P.....	35	Hurd st.....	overseer

D

DOW, JAMES	149 B st.	contractor
DOW, JOHN D.	125 Stackpole st.	carpenter
DOWD, MICHAEL J.	5 Dane st. ave.	clerk
DOZOIS, HILAIRE	363 Dutton st.	overseer
DRAPER, HENRY J.	11 Bolton pl.	carriage painter
DRISCOLL, JEREMIAH	834 Central st.	operative
DRURY, JOHN E.	44 Hanks st.	plumber
DUDLEY, DARWIN E.	2 Belmont st.	insurance agent
DUGDALE, JAMES P.	48 Marlborough st.	tobacconist
DUNKLEE, BEN F.	67 London st.	foreman
DUNLAP, HARRY	20 Nesmith st.	merchant
DUNN, JAMES J.	508 Gorham st.	stone cutter
DURANT, CHARLES W.	74 Chapel st.	jeweler
DWYER, JOHN F.	262 Concord st.	painter
DWYER, WILLIAM E.	371 Central st.	barber

E

EAMES, MELVIN	155 West Sixth st.	pattern maker
EATON, CHARLES W.	108 Myrtle st.	broker
EATON, DANIEL A.	107 Myrtle st.	insurance clerk
EDGELL, FRED N.	119 Andover st.	collector
EDWARDS, CHARLES F.	196 Hale st.	designer
ELLINGWOOD, EDWARD	56 Huntington st.	druggist
ELLINGWOOD, GEORGE B.	240 E. Merrimack st.	clerk
EMERSON, CHARLES F.	512 Westford st.	clerk
EMERSON, JOHN N.	54 Mead st.	upholsterer
EMSLEY, GEORGE	20 Weed st.	comb maker
ENWRIGHT, CORNELIUS F.	11 Cedar st.	painter
ERSKINE, CHARLES M.	138 Mt. Vernon st.	grocer
ESTES, FRED A.	31 Doane st.	clerk
EVANS, FREDERICK	38 Blossom st.	marble cutter
EVANS, GEORGE C.	34 Thirteenth st.	hay and grain dealer
EVERETT, WILLARD	12 Belmont st.	manager

F

FAGAN, FRANCIS M.....	18 Newhall st.....	city messenger
FAGAN, JOHN H. jr.....	18 Newhall st.....	spinner
FALLON, FRANK J.....	11 Little st.....	machinist
FARLEY, JOSEPH	517 Lawrence st.....	barber
FARRELL, JOHN J.....	624 Market st.....	machinist
FARRINGTON, CHARLES E..	20 Webster st.....	overseer
FARRINGTON, WILLIS	234 Nesmith st.....	manufacturer
FAULKNER, JOHN A.....	32 Belmont av.....	manufacturer
FAY, FREDERICK T.....	91 Fort Hill av.....	druggist
FAY, JOSEPH F.....	1 Mt. Pleasant st.....	farmer
FELL SAMUEL.....	68 Bartlett st.....	carpet weaver
FELS, AUGUST	989 Lakeview av.....	manufacturer
FELTON, HENRY F.....	386 Andover st.....	organist
FERRIS ROBERT.....	399 Lincoln st.....	electrician
FIELD, ALBERT L.....	1057 Gorham st.....	druggist
FIFE, JAMES	46 Merrill st.....	machinist
FIFIELD, GEORGE W.....	1180 Middlesex st.....	manufacturer
FINNEGAN, JAMES W.....	122 Merrimack corp.....	overseer
FINNERTY, FRANCIS.....	172 Warren st.....	moulder
FINNERTY, PATRICK J.....	196 Fayette st.....	laborer
FISH, CHARLES T.....	26 Dover st.....	agent
FISHER, JOHN J.....	236 Broadway.....	machinist
FITZGERALD, PATRICK	120 Adams st.....	clerk
FITZGIBBON, PATRICK	503 Gorham st.....	shoemaker
FLANDERS, CHARLES H....	8 Osgood st.....	foreman
FLEMING, SAMUEL	36 Hildreth st.....	janitor
FLETCHER, CLARENCE W....	95 Butterfield st.....	clerk
FLETCHER, MARCELLUS H..	49 Powell st.....	gentleman
FLETCHER, SILAS W.....	120 Agawam st.....	manufacturer
FLYNN, EDWARD S.....	37 Elm st.....	machinist
FLYNN, EUGENE F.....	32 Cady st.....	finisher
FLYNN, JAMES	12 Cedar st.....	teamster
FLYNN, PATRICK	141 Lawrence street	L. & S. St. Ry.
FOSTER, BENJAMIN F.....	55 Puffer st.....	second hand
FOSTER, HIRAM A.....	209 Cabot st.....	machinist

F

FOSTER, WILLIAM	.....9	Wilsendale pl.....	machinist
FOX, WARREN	.....209	Summer st.....	gentleman
FREEMAN, BENJAMIN F.	.....25	Fort Hill av.....	lighting dept.
FREEMAN, JAMES E.	.....83	Andrews st.....	grocer
FROST, BENJAMIN W.	.....26	Tyler st.....	wool sorter
FROST, CHANNING A.	.....1677	Middlesex st.....	dealer
FROST, CHARLES H.	.....26	Central st.....	jeweler
FRYE, GEORGE H.	.....36	Second st.....	inspector sewers
FULLER, GEORGE B.	.....1524	Gorham st.....	contractor
FULTON, ROBERT S.	.....27	Myrtle st.....	clerk

G

GAHAGAN, EDWARD W.	.....205	Church st.....	clerk
GAHAGAN, JAMES F.	.....205	Church st.....	plumber
GALE, CHARLES A.	.....23	Jenness st.....	clerk
GARDNER, EVERETT M.	.....198	Holyrood av.....	architect
GARMON, JOSEPH A.	.....78	Nineteenth st.....	J. C. Ayer Co.
GARVEY, MICHAEL J.	.....203	Broadway.....	liquor dealer
GATES, HENRY K.	.....400	E. Merrimack st.....	coal dealer
GATES, PRESCOTT C.	.....400	E. Merrimack st..	belt manufacturer
GATES, ROYAL W.	.....73	Gates st.....	belt manufacturer
GEE, CHARLES E.	.....176	Cross st.....	machinist
GERRY, EDGAR A.	.....27	Humphrey st.....	express mess.
GIBBY, WILLIAM H.	.....110	Hale st.....	shoe cutter
GILLON, HUGH F.	.....84	Bartlett st.....	editor
GILMAN, WALTER H.	.....28	Fourth st.....	clerk
CILMORE, WILLIAM	.....65	Hudson st.....	clerk
GINTY, PHILIP	.....10	Walnut st.....	slater
GLIDDEN, CHARLES J.	.....1131	Middlesex st.....	treasurer
GOING, CHARLES F.	.....47	Hurd st.....	clerk
GOING WILLIAM B.	.....85	Westford st.....	janitor
GOODALE, OAL B.	.....19	Robinson st. ct.....	marble cutter
GOODALL, SAMUEL	.....417	Dutton st.....	watchman

G

GOODELL, HARLAN P.....	14	Highland st.....	dealer
GOODWIN, CHESTER S.....	2	Davis sq.....	finisher
GOOKIN, JAMES	300	Concord st.....	furniture dealer
GORDON, JOHN G.....	94	John st.....	clerk
GORMAN, JAMES	42	Hudson st.....	spinner
GORMAN, JAMES E.....	412	Gorham st.....	boots and shoes
GORMLEY, EDWARD F.....	22	Lyon st.....	clerk
GORMLEY, JOSEPH H... ..	27	Lyon st.....	clerk
GOULDING, WILLIAM H.....	123	Walker st.....	slater
GOWARD, EDWARD T.....	274	Appleton st.....	gentleman
GRADY, JAMES	398	Lincoln st.....	carpenter
GRADY, JOHN J.....	492	Market st.....	clerk
GRAVES, CHARLES B.....	1	Blodgett st.....	knitter
GRAY, ALANSON	99	So. Walker st.....	provision dealer
GRAY, ANDREW A.....	176	Ford st.....	clerk
GRAY, HARRY	75	Chapel st.....	grocer
GRAY, JOHN J.....	10	Kinsman st.....	real estate
GREEN, GEORGE J.....	368	Lawrence st.....	machinist
GREEN, JOHN	240	Thorndike st.....	engineer
GREEN, JOHN J.....	166	Smith st.....	dealer
GREEN, LORIN	379	Chelmsford st.....	railroad
GREENWOOD, OTHELLO O... ..	180	Hale st.....	dealer
GREGG, GEORGE V.....	40	Robbins st.....	tailor
GREIG, ALEXANDER	52	Cambridge st.....	carpenter
GRIFFIN, JOHN	161	Merrimack corp.....	laborer
GRIFFIN, SAMUEL P.....	91	Mansur st.....	gentleman
GROVER, HERBERT E.....	62	Fifth st.....	barber
GUMB, HARRY M.....	17	Fay st.....	stone cutter
HALL, LEROY C.....	23	June st.....	commission merchant

H

HALLOWELL, CHARLES E... ..	743	Bridge st.....	machinist
HALSTEAD, CHARLES W....	69	Bartlett st.....	clerk

H

HAMILTON, AMASA S.....	38 Race st.....	express
HAMILTON, CHARLES A.....	6 Seventh st.....	cabinet maker
HANCHETT, FRANK	89 Harvard st.....	produce dealer
HANSBURY, JAMES W.....	405 Lakeview av.....	machinist
HANSON, JAMES S.....	584 Westford st.....	trader
HAPGOOD, EDGAR	221 High st.....	manufacturer
HARDMAN, DAVID B.....	123 Agawam st.....	printer
HARRIGAN, WILLIAM H.....	580 School st.....	clerk
HARRIS, ARTHUR W.....	180 Pawtucket st.....	merchant
HARRIS, EUGENE A.....	659 School st.....	real estate
HARRIS, FRED E.....	80 Mammoth road.....	engineer
HARRIS, GEORGE H.....	37 Blossom st.....	operative
HARRIS, GEORGE W.....	158 Mt. Vernon st.....	manufacturer
HART, DANIEL J.....	15 Lombard st.....	baker
HARTWELL, GEORGE W.....	649 Westford st.....	asst. supt. streets
HASEY, HENRY P.....	19 Osgood st.....	dealer
HATCH, HENRY	65 Fay st.....	grocer
HAWKES, LEVI W.....	228 Wentworth av.....	furniture dealer
HEBERT, SAMUEL P.....	23 Adams st.....	grocer
HENRY, JOHN B.....	68 Fifth st.....	operative
HICKEY, CORNELIUS L.....	20 Kinsman st.....	spinner
HICKS, JOSEPH	119 Gates st.....	clerk
HIGGINS, DANIEL J.....	132 Church st.....	operative
HIGGINS, PATRICK	872 Central st.....	machinist
HILL, EDGAR M.....	60 Tyler st.....	reporter
HILL, GEORGE F.....	263 Appleton st.....	carriage maker
HILL, JAMES E.....	29 Thorndike st.....	inspector
HILL, JAMES G.....	263 Appleton st.....	carriage maker
HOBSON, CHARLES H.....	26 Hanks st.....	manager
HOLGATE, SAMUEL	6 Hamilton corp.....	second hand
HOLLAND, WALTER H	32 Pine Hill st.....	mattress maker
HOLMES, CHRISTOPHER	24 Mt. Washington st.....	merchant
HOLMES, MARK E.....	207 Mammoth road.....	wood worker
HOOLE, HENRY	66 Bartlett st.....	asst. assessor
HORNE, FRED	150 Westford st.....	coal dealer

H

HOWARD, JAMES	19 Ellsworth st.....	folder
HOWE, ALFRED J.....	4 Eighth av.....	real estate
HOWE, CHARLES E.....	45 Varney st.....	lumber dealer
HOWE, WALTER H.....	315 Summer st.....	real estate
HOYT, FRANK	139 A st.....	shoe dealer
HULL, GEORGE S.....	583 Central st.....	manufacturer
HUNT, LEONARD D.....	234 Cabot st.....	overseer
HUNT, WILLIAM F.....	14 Merrill st.....	loom fixer
HUNTER, JAMES F.....	9 Harrison st.....	barber
HUNTOON, ADELBERT M....	182 Mt. Vernon st.....	boots and shoes
HUNTOON, GEORGE L.....	37 Butterfield st.....	broker
HURD, FRANK W.....	19 Harrison st.....	treasurer
HUSBAND, THOMAS H.....	2 Davis sq.....	switchman
HYLAN, EUGENE S.....	28 Nesmith st.....	manufacturer

I

ILSLEY, PHILIP H.....	513 Westford st.....	trader
INGHAM, WILLIAM A.....	1179 Middlesex st.....	wholesale grocer
IRVING, ANDREW	rear 28 Walnut st.....	laborer
IRVING, WILLIAM J.....	rear 28 Walnut st.....	weaver
IRWIN, JOHN M.....	15 Walnut st....	wholesale confectioner

J

JACOBS, HERBERT M.....	176 Westford st.....	carpenter
JACQUES, SILAS H.....	32 Broadway.....	clerk
JEFFERS, GEORGE B.....	15 Pollard st.....	clerk
JENNESS, FRED W.....	710 Chelmsford st.....	dealer
JENNISON, GEORGE H.....	45 Kirk st.....	dentist
JENSEN, OTTO	334 Walker st.....	moulder
JEWETT, JAMES L.....	49 French st.....	overseer
JOHNSON, COOLIDGE R.....	5 Lowell Co yard.....	watchman
JOHNSON, FRANKLIN E.....	19 Royal st.....	clerk

J

JOHNSON, FRANCIS	494 Lawrence st.....	dealer
JOHNSON, ISAAC G.....	317 Chelmsford st.....	carpenter
JOHNSON, MICHAEL J.....	328 Suffolk st.....	musician
JOHNSON, WILLIAM J.....	47 Kirk st.....	milliner
JOHNSTON, THOMAS	137 Fayette st.....	loom fixer
JOCKOW, GEORGE W.....	895 Middlesex st.....	carpenter
JUDKINS, CHARLES J. H.....	39 Clark st.....	clerk

K

KANE, PATRICK F.....	37 Elm st.....	grocer
KANE, THOMAS.....	20 Mill st.....	wool sorter
KEEFE, JAMES	451 Lawrence st.....	barber
KEEGAN, THOMAS M.....	45 Crosby st.....	janitor
KEITH, AUSTIN	223 Wentworth av.....	druggist
KELLEY, EDWARD W.....	129 Moore st.....	draughtsman
KELLEY, HENRY F.....	174 Crosby st.....	machinist
KELLEY, JOHN A.....	58 West Third st.....	painter
KELLEY, JOHN F.....	11 Burnside st.....	carpenter
KELLEY, SIMON	188 South st.....	clerk
KENDALL, CHARLES A.....	339 Gorham st.....	dealer
KENNEDY, DANIEL	2 rear 42 Keene st.....	mattress maker
KENNEDY, JAMES J.....	31 Marion st.....	barber
KENNEDY, THOMAS J.....	503 Fletcher st.....	clerk
KERSHAW, THOMAS	23 Otis st.....	spinner
KEYES, HENRY F.....	372 Broadway.....	gentleman
KEYES, HENRY J.....	372 Broadway.....	clerk
KEYES, JULIAN B.....	102 Third st.....	bank teller
KIDDER, CHARLES F.....	1 Spaulding st.....	clerk
KIERNAN, PATRICK	44 Boott corp.....	loom fixer
KILBRIDE, PATRICK	14 Stanley st.....	provision dealer
KILGORE FRED H.....	27 Windsor st.....	life underwriter
KILGORE JOHN M.....	42 Columbus av.....	insurance agent
KILLPARTRICK, SAMUEL W.....	1057 Middlesex st.....	fruit dealer

K

KIMBALL, WILLIAM H.....	475 Stevens st.....	manufacturer
KING, GARDNER W.....	655 Westford st.....	bookkeeper
KINGSBURY, ALPHEUS R.....	90 Billings st.....	blacksmith
KITTREDGE, ABNER L.....	101 Myrtle st.....	merchant
KITTREDGE, LUTHER F.....	42 Jenness st.....	stone contractor
KNAPP, CHARLES L.....	85 Fort Hill av.....	cashier
KNAPP, FRED L.....	153 Westford st.....	manufacturer
KNAPP, JOEL	153 Westford st.....	manufacturer
KNOWLES, JEFFERSON A....	50 Chelmsford st.....	gentleman

L

LABOUNTY, LEONARD J.....	250 High st.....	collector
LACOUTURE, JOSEPH S.....	78 Rock st.....	clerk
LADD, HENRY W.....	66 Kirk st.....	carpenter
LAMOTHE, LOUIS P.....	51 Mammoth road.....	baker
LANDERS, WILLIAM H.....	397 Dutton st.....	overseer
LANE, STEPHEN H.....	4 Pine st.....	carpenter
LANG, ARTHUR W.....	96 Jeness st.....	druggist
LANG, HORACE B.....	85 Forrest st.....	carpenter
LAWRENCE, ABBOTT	113 Fort Hill av.....	optician
LAWRENCE, FRANK C.....	20 Lane st.....	car inspector
LEAVITT, GEORGE E.....	99 Mt. Washington st.....	foreman
LEBLANC, ALFRED	67 Davidson st.....	grocer
LEBRUN, LEWIS	467 Moody st.....	clerk
LEITH, WILLIAM H.....	243 Lawrence st.....	grocer
LIBBEE, GEORGE F.....	58 Wannalancit st.....	trader
LIBBY, CHARLES F.....	69 Robins st.....	paymaster
LIBBY, FRED V.....	56 Harvard st.....	clerk
LIBBY, MARTIN V. B.....	331 Walker st.....	blacksmith
LIBBY, OLIVER C.....	399 Stevens st.....	printer
LIDDELL, ANDREW	25 Twelfth st.....	collector
LITTLE, MOSES	77 Mansur st.....	merchant
LIVINGSTON, CORNELIUS S..	208 Branch st.....	clerk

L

LIVINGSTON, EPHRAIM D...	287 Westford st.....	printer
LIVINGSTON, WILLIAM	77 Livingston av.....	clerk
LOCKE, HERBERT W.....	187 Hovey st.....	grocer
LOFGREN, HALVAR.....	12 Sidney st.....	foreman
LUNDBERG, FRANK G.....	44 Fay st.....	laundryman
LUSCOMB, CHARLES H.....	44 Mammoth road.....	painter
LYMAN, ARTHUR R.....	431 Wilder st.....	clerk
LYNCH, THOMAS F.....	19 James st.....	steam fitter
LYNCH, THOMAS J.....	77 Whipple st.....	laborer
LYNCH, THOMAS J.....	31 Crowley st.....	clerk
LYONS, JOHN K.....	5 rear 35 Summer st.....	pin maker

M

MADIGAN, MICHAEL A.....	23 Bassett st.....	marble polisher
MAGEE, JOHN J.....	359 Lawrence st.....	grocer
MAGUIRE, THOMAS F.....	22 Varney st.....	advertising agent
MAHONEY, JOHN P.....	41 Butterfield st.....	assessor
MAHONEY, THOMAS	46 Butterfield st.....	board. ho. keeper
MANGAN, THOMAS J.....	754 Central st.....	laborer
MANN, ALDEN T.....	18 Belmont st.....	manager
MARDEN, GEORGE A.....	84 Fairmount st.....	editor
MARSHALL, ARTHUR H.....	538 Varnum av.....	farmer
MARSHALL, AVERY J.....	215 Parker st.....	laborer
MARSHALL, JAMES G.....	1067 Gorham st.....	paymaster
MARSTON, GEORGE H.....	775 Bridge st.....	real estate
MARTIN, EDWARD F.....	543 Gorham st.....	grocer
MARTIN, WILLIAM F.....	26 North st.....	tailor
McALOON, WILLIAM	157 Howard st.....	retired
McALOON, JOHN B.....	1007 Central st.....	weaver
McARDELL, EDWARD	50 West st.....	machinist
McCANN, JAMES	rear 304 Adams st.....	mule spinner
McCANN, PATRICK	412 Lincoln st.....	laborer
McCARTHY, JAMES F.....	268 Suffolk st.....	clerk

M

McCARTHY, JOHN J.....	244	Broadway.....	clerk
McCLUSKY, WILLIAM J.....	40	Union st.....	student
McCUE, MICHAEL H.....	781	Broadway.....	water works
McDANIELS, WALTER H.....	437	East Merrimack st....	manufacturer
McDONALD, JAMES L.....	221	Foster st.....	provision dealer
McDONALD, JOSEPH A.....	386	Mammoth rd.....	merchant
McDOUGALL, JAMES	1019	Central st.....	machinist
McELHOLM, DANIEL B.....	188	Concord st.....	weaver
McELHOLM, WILLIAM H.....	188	Concord st.....	plumber
McEVOY, PATRICK	17	Floyd st.....	painter
McGARRAHAN, JAMES	103	Lawrence st.....	machinist
McGILLEY, PATRICK ..	112	Concord st.....	wool sorter
McGRATH, JOSEPH H.....	88	Coburn st	janitor
McGUIRE, PHILIP F.....	2	Merrill's ct.....	weaver
McINTIRE, GEORGE E.....	605	Wilder st.....	machinist
McKEON, JAMES E.....	101	Grand st.....	clerk
McKINLEY, ROBERT	101	Woodward av.....	machinist
McLAUGHLIN, FRANK A....	30	Pleasant st.....	plumber
McMAHON, FRANK	539	Chelmsford st.....	machinist
McMAHON, MICHAEL R.....	111	High st.....	laborer
McMAHON, PETER	39	Carter st.....	bleachery employee
McMAHON, THADY.....	11	Watson st.....	barber
McMULLEN, MICHAEL	20	Charles st.....	operative
McNALLY, JAMES	261	Thorndike st.....	blacksmith
McNALLY, JAMES R.....	17	Newhall st.....	conductor
McOSKER, HUGH C.....	209	Stackpole st.....	wall paper
McQUADE, ARTHUR	65	Pleasant st.....	foundry foreman
McQUADE, MICHAEL	65	Pleasant st.....	overseer
McQUESTEN, JOHN.....	89	Washington st.....	clerk
McVEY, DANIEL F.....	135	Gorham st.....	plumber
MEAD, ASA W.....	3	Wachusett st.....	machinist
MEADE, WILLIAM V.....	3	Clark st.....	clerk
MERRILL, FRANK M.....	156	Tenth st.....	dealer
MERRILL, OTIS A.....	92	Wannalancit st.....	architect
MESERVE, HARRY	243	Westford st.....	express

M

METCALF, GEORGE E.....	93	Vernon st.....	insurance agent
MIDGELY, ROBERT	179	Hale st.....	overseer
MILES, WALDO F.....		City Farm.....	clerk
MILLER, GEORGE W.....	75	Howard st.....	railroad
MISKELLA, JAMES F.....	35	Mead st.....	clerk
MITCHELL, CHARLES F.....	343	Market st.....	clerk
MITCHELL, JAMES E.....	11	Coral st.....	broker
MITCHELL, JAMES W.....	79	Mt Washington st.....	overseer
MONAGHAN, JOHN F.....	18	Bleachery st.....	superintendent
MONAHAN, PATRICK R.....	16	Albion st.....	teamster
MOONEY, PATRICK J.....	386	Concord st.....	plumber
MORRIS, FRANK O.....	199	Broadway.....	retired
MORRIS, WILLIAM	27	Warren st.....	painter
MORRISSEY, FRANK.....	46	Albion st	janitor
MORRISON, JAMES F.....	46	Auburn st.....	barber
MORSE, FRED N.....	19	Leroy st.....	clerk
MORSE, WILLIS E.....	70	Third st.....	electrician
MULCAHY, WILLIAM H.....	62	Lewis st.....	actor
MULDOON, THOMAS	427	Lincoln st.....	piper
MULDOON, THOMAS H.....	268	Suffolk st	clerk
MULLIGAN, PATRICK	218	Adams st.....	machinist
MULLIGAN, THOMAS J.....	92	Pleasant st.....	reporter
MUNN, FRANCIS D.....	603	Bridge st.....	grocer
MURKLAND, ARTHUR J.....	313	High st.....	clerk
MURKLAND, JAMES	313	High st.....	foreman
MURPHY, DENNIS	33	Tyler st.....	merchant
MURPHY, JAMES	221	Foster st.....	real estate
MURPHY, JEREMIAH F.....	13	Wiggin pl.....	clerk
MURPHY, JOHN D.....	14	Walnut st.....	operative
MURPHY, JOHN F.....	112	Jefferson st.....	clerk
MURPHY, WILLIAM W.....	360	Westford st.....	dealer
MURRAY, BARTHOLOMEW F.....	394	Adams st.....	real estate
MURRAY, FRANK	44	Worthen st.....	operative
MURRAY, JOHN J.....	776	Central st.....	operative
MURRAY, WILLIAM F.....	26	Central st.....	clerk

M

MUSSEY, GEORGE L.....917 Middlesex st.....clock repairer

N

NAY, HOMER B.....382 Worthen st.....engineer
 NAYLOR, CHARLES250 Wentworth av.....druggist
 NELSON, WILLIAM 8 Bassett st.....tea dealer
 NESMITH, JOSEPH A.....229 Andover st.....gentleman
 NEWHALL, FRED C..... 26 Hntington st.....clerk
 NICHOLS, FRANK C.....800 Broadway.....foreman
 NOBLE, CHARLES H.....362 Broadway.....clerk
 NOBLE, GEORGE H.....362 Broadway.....real estate
 NOBLE, JOHN21 Carter pl.....second hand
 NOLAN, JOHN H.....75 West Third st.....laborer
 NORCROSS, NICHOLAS G.....69 Huntington st.....insurance agent

O

O'BRIEN, DANIEL J.....318 Nesmith st.....tea dealer
 O'BRIEN, DAVID W.....12 Columbus av.....manager
 O'BRIEN, JOHN.....32 Whipple st.....blacksmith
 O'BRIEN, JOHN J..... 111 High st.....wool sorter
 O'BRIEN, JOHN J.....399 Worthen st.....second hand
 O'CONNELL, DANIEL J.....93 Railroad st.....clerk
 O'CONNELL, JOHN J..... 61 Newhall st.....liquor dealer
 O'CONNOR, MICHAEL J.....900 Gorham st.....stone cutter
 OFFUTT, GEORGE F.315 High st.....merchant
 OGDEN, JOHN T.....4 Olive st.....second hand
 O'HARE, FRANK13 Kidder st.....laborer
 O'HARE, JAMES134 Gorham st.....plumber
 O'HARE, JOHN P.....134 Gorham st.....weaver
 O'HEARN, JOHN A.....9 Phillips st.....clothier

O

O'HEARN, PATRICK	282	Riverside st.....	contractor
O'MEARA, MARTIN	969	Central st.....	dealer
O'NEIL, DENNIS J.....	180	Broadway.....	operative
O'NEIL, JAMES	88	Agawam st.....	bolt maker
O'NEIL, JOHN H.....	233	Appleton st.....	tinsmith
O'ROURKE, JOSEPH	641	Market st.....	teamster
ORT, JOHN J.....	385	Worthen st.....	blacksmith
OSGOOD, ALBERT E.....	869	Gorham st.....	farmer
O'SHEA, MICHAEL	14	Pleasant st.....	machinist
OSTERHOUT, FRED S.....	159	Middlesex st.....	clerk
O'SULLIVAN, HUMPHREY...	105	Butterfield st.....	shoe dealer
O'SULLIVAN, JAMES	105	Mt. Washington st.....	shoe dealer
OWEN, GEORGE E.....	221	High st.....	accountant

P

PAGE, HORACE C.....	410	Westford st.....	clerk
PALM, NELSON	25	Fay st.....	gardener
PALMER, CHARLES D.....	129	Fairmount st.....	gentleman
PALMER, SAMUEL B.....	394	Beacon st.....	grocer
PARKER, ARTHUR W.....	306	Pine st.....	builder
PARKER, CHARLES A.....	13	Second st.....	painter
PARKER, THEODORE E, jr...	5	James' ct.....	manager Tel. Co.
PARKER, WALTER L.....	23	Lombard st.....	manufacturer
PARKIN, PRESCOTT R.....	596	Beacon st.....	clerk
PARKIN, WALLACE G.....	614	Westford st.....	clerk
PARSONS, GEORGE F.....	158	Hale st.....	printer
PARTHENAIS, CHARLES H...	779	Merrimack st.....	merchant
PARTHENAIS, WILLIAM A...	16	Grand st.....	dealer
PEARSON, FRED H.....	725	Bridge st.....	boot and shoes
PENDERGAST, JOHN H.....	95	Dummer st.....	stone cutter
PENN, CHARLES A.....	227	West London st.....	carpenter
PEPIN, WILLIAM H.....	540	Merrimack st.....	dentist
PEPPARD, PATRICK S.....	43	Wamesit st.....	loom fixer

P

PERHAM, FOSTER	100	Riverside st.....	clerk
PERHAM, HAVEN C.....	19	Wannalancit st.....	agent
PERSON, NILS	82	London st.....	carpenter
PEVEY, FRANKLIN S.....	68	Dover st.....	iron founder
PEVEY, JAMES A.	366	Walker st.....	iron founder
PHILBRICK, CALEB	389	Walker st.....	teamster
PIERCE, ABNER K.....	419	Chelmsford st.....	painter
PIERCE, CASSIUS W.....	244	Stevens st.....	express
PIHL, CARL G. A. F. W. E.....	45	Fay st.....	engineer
PILLING, HERBERT	112	Walker st.....	shoe manufacturer
PINDAR, JAMES H.....	352	E. Merrimack st.....	dealer
PINDER, ALBERT L.....	120	Chapel st.....	carpenter
POLLARD, ARTHUR G.....	110	Mansur st.....	merchant
POORE, FRANK A.....	26	Walnut st.....	machinist
POTTER, WILLIAM H.....	290	Pine st.....	clerk
POWERS, JOHN	169	Broadway.....	laborer
POWERS, JOHN T.....	27	Pleasant st.....	hairdresser
PRESCOTT, DUDLEY M.....	23	Oak st.....	plasterer
PRESTON, BENJAMIN	174	Warren st.....	dyer
PRESTON, CHARLES R.....	335	Thorndike st.....	civil engineer
PRINCE, GEORGE C.....	5	Simpson st.....	picture framer
PROCTOR, FRED W.....	57	Walker st.....	job express
PUFFER, EUGENE W.....	22	Burt st.....	clerk
PUFFER, FRED A. A.....	62	Highland st.....	dealer
PUFFER, FREEMAN W.....	22	Burt st.....	crookery dealer
PUFFER, STEPHEN B.....	942	Middlesex st.....	manufacturer
PUTNAM, FRANK E.....	1210	Middlesex st.....	restaurant

Q

QUINN, MICHAEL J.....	39	Andover st.....	woolen weaver
QUIRK, WILLIAM	185	Adams st.....	operative

R

RAMSAY, JAMES P.....	2	Runels ct.....	tower switchman
RANDLETT, FRED M.....	8	Gates st.....	fish dealer
RANLETT, ORRIN B.....	353	Wilder st.....	grocer
RANDLETT, ORIN B.....	43	Royal st.....	clerk
READ, WILLIAM A.....	228	Liberty st.....	salesman
READY, AMBROSE L.....	67	Walker st.....	junk dealer
READY, JAMES A.....	12	Forrest st.....	boiler maker
REARDON, PATRICK	rear 95	Dummer st.....	fireman
REDDING, DANIEL	45	Adams st.....	jobbing
REDMOND, EDWARD L.....	37-3	Bartlett st.....	clerk
REDMOND, JAMES J.....	37-3	Bartlett st.....	loom fixer
REYNOLDS, BERNARD	84	Common st.....	barber
RICE, HARRY R.....	134	Liberty st.....	manager
RICHARDS, EDWIN W.....	10	Sawtell pl.....	collector
RICHARDS, JOHN	44	Bartlett st.....	expressman
RICHARDSON, ALBERT J....	161	Hildreth st.....	shuttle maker
RICHARDSON, JOHN H.....	76	French st.....	grinder
RICHARDSON, WILLIAM W..	7	Willie st.....	grocer
RILEY, BERNARD F.....	232	West Manchester st.....	clerk
RILEY, CHARLES	262	Concord st.....	hairdresser
RILEY, JOHN	110	Lewis st.....	laborer
ROACH, ANDREW F.....	198	Worthen st.....	liquor dealer
ROARK, ANDREW	455	Market st.....	blacksmith
ROARK, JOHN J.....	28	Lyon st.....	clerk
ROARK, MILES H.....	28	Lyon st.....	Ins. Agt
ROBERTS, WARREN N.....	26	Eighteenth st.....	grocer
ROBBINS, CHARLES H.....	62	Twelfth st.....	tobacconist
ROCK, GEORGE N.....	222	E. Merrimack st.....	loom fixer
ROGERS, JOHN F.....	29	Cedar st.....	undertaker
ROLLINS, WINSTON I.....	33	Fourth st.....	dealer
ROPER, GEORGE A.....	335	Walker st.....	clerk
ROUNTREE, ALEXANDER E..	177	Pleasant st.....	clerk
ROWELL, EDWARD T.....	70	Methuen st.....	bank president
ROWLANDSON, WILLIAM E..	1012	Lakeview av.....	dyer
RUNELS, CHARLES	321	Thorndike st.....	contractor

R

RUSHWORTH, CHARLES B...58 So. Loring st.....agent
 RUSSELL, ALONZO L.....12 Coral st.....agent
 RUSSELL, ASA C.....331 Wilder st.....manufacturer
 RUSSELL, EDWARD A.....320 Wentworth av.....carpenter
 RUSSELL, JAMES B.....59 Nesmith st.....clerk
 RUTHERFORD, JOSEPH H... 342 Westford st.....furniture dealer
 RYAN, JOHN789 Westford st.....brass founder
 RYERSON, HENRY J.....364 E. Merrimack st.....gentleman

S

SALMON, EDWARD A.....186 School st.....overseer
 SANBORN, EDWARD P.....79 Royal st.....builder
 SANBORN, EDWIN256 Ea Merrimack st....carriage maker
 SANBORN, FRED W.....44 Fred st.....carpenter
 SANBORN, WALTER E.....12 Lane st.....clerk
 SAUNDERS, ARTHUR W.....94 Twelfth st.....manufacturer
 SAUNDERS, FRANCIS E.....119 Middlesex st.....overseer
 SAUNDERS, ORLANDO87 Nesmith st.....agent
 SAXE, ROBERT G.....79 Appleton st.....board. ho. keeper
 SAYERS, THOMAS J.....64 Suffolk st.....car starter
 SCANNELL, CORNELIUS62 Cambridge st.....boiler maker
 SCOTT, FRANK59 French st.....overseer
 SCOTT, JAMES172 School st.....gentleman
 SCOTT, SAMUEL.....23 Kirk st.....dealer
 SCRIBNER, GEORGE A.....158 Westford st.....machinist
 SEETON, ROBERT B.....19 Eighth av.....brass worker
 SENTER, WILLIAM F.....238 Cabot st.....overseer
 SHANNESSY, GEORGE W....rear 592 Gorham st.....wheelwright
 SHEA, S. JOHN.....778 Central st.....real estate
 SHEPARD, JESSE H.....276 Parkview av.....real estate
 SHEPHERD, ROBERT J.....358 Concord st.....B. & M. R. R.
 SHERWELL, WILLIAM M....260 Pine st.....superintendent

S

SHERWOOD, FRANK J.....	79	Vernon st.....	glue manufacturer
SILVER, EDWARD H.....	74	Thorndike st.....	manufacturer
SIMMONS, RALPH A.....	746	Broadway.....	clerk
SILVER, FRED W.....	94	So. Loring st.....	machinist
SIMONDS, FRANK J.....	170	Pleasant st.....	editor
SIMPSON, JOHN A.....		Methuen st cor Tenth.....	contractor
SLADEN, ARTHUR W.....	15	Otis st.....	U. S. Cartridge Co.
SLATER, JOSEPH F.....	611	Wilder st.....	gentleman
SMILEY, SYLVANUS C.....	19	Washington st.....	gentleman
SMITH, CALEB L.....	878	Chelmsford st.....	grocer
SMITH, EDWARD W.....	21	Hudson st.....	printer
SMITH, JAMES	69	Third st.....	engineer
SMITH, JAMES	28	Leroy st.....	stone mason
SMITH, LORENZO E.....	122	Mammoth road.....	bookkeeper
SMITH, PHILIP A.....	19	Common st.....	shoemaker
SNOW, SAMUEL D.....	68	Walker st.....	painter
SNOW, SAMUEL E.....	89	School st.....	mason
SOROGHAN, NICHOLAS	33	Pleasant st.....	tailor
SPALDING, EDWARD F.....	39	Tyler st.....	gentleman
SPALDING, WILLIAM B.....	1	Center st.....	real estate
SPEAR, FREDERICK A.....	576	Westford st.....	agent
SPRAGUE, JOHN M.....	76	Chapel st.....	gentleman
STACEY, DUANE P.....	75	Beacon st.....	clerk
STACK, FRANK P.....	303	Hildreth st.....	painter
STAFFORD, EBEN B.....	301	Mammoth road.....	overseer
STAFFORD, WILLIAM H.....	9	Meadowcroft st.....	janitor
STANTON, JOHN B.....	23	Newhall st.....	wool sorter
STAPLES, GEORGE N.....	30	Washington st.....	clerk
STEARNS, FRANK W.....	111	Grand st.....	laborer
STERNBERG, ISRAEL H.....	142	West Sixth st.....	reporter
STEVENSON, HERBERT O....	264	Beacon st.....	druggist
STICKNEY, HENRY H.....	28	Beech st.....	grocer
STILES, PERRY P	15	Varney st.....	grocer
STIMPSON WALTER W.....	441	Dutton st.....	machinist

S

STOCKMAN, EDWARD	1164 Middlesex st.	lumber surveyor
STOPHERD, ALBERT	29 Bassett st.	second hand
STOTT, CHARLES A.	173 Nesmith st.	manufacturer
STOTT, CHARLES F.	96 Pine st.	provision dealer
STOTT, JOHN W.	36 Marlborough st.	accountant
STOUGHTON, WILLACE H.	8 Frye st.	job express
STRATTON, TORREY E.	167 Stevens st.	clerk
STURTEVANT, CHARLES S.	532 Westford st.	musician
SULLIVAN, CORNELIUS F.	113 Pleasant st.	barber
SULLIVAN, DENNIS A.	164 Wentworth av.	editor
SULLIVAN, DENNIS A.	578 Market st.	piper
SULLIVAN, FRANK J.	45 Wamesit st.	clerk
SULLIVAN, JAMES A.	95 Mt. Washington st.	clerk
SULLIVAN, JOHN E.	37 Bolt st.	B. & M. R. R.
SULLIVAN, MICHAEL	180 Broadway	operative
SULLIVAN, MICHAEL E.	17 Merrill st.	barber
SWAN, DANIEL A.	486 E. Merrimack st.	merchant
SWAN, JOSEPH C.	142 Andover st.	gentleman
SWEATT, ELLSWORTH E.	80 Cambridge st.	carpenter
SYKES, LOUIS B.	859 Lawrence st.	clerk

T

TAFF, RICHARD	262 Fayette st.	manufacturer
TALBOT, CHARLES R.	270 Wilder st.	merchant
TANSEY, JOHN F.	30 Pleasant st.	coachman
TAYLOR, FRANK B.	7 Harrison st.	mason
TAYLOR, GEORGE H.	29 Twelfth st.	C. I. Hood & Co.
TAYLOR, GEORGE H.	41 Nichols st.	stable keeper
TAYLOR, JOSEPH	28 So. Whipple st.	dealer
TAYLOR, LUKE B.	8 Wachusett st.	weaver
TEAGUE, THOMAS	19 Burns st.	painter
TEEL, GEORGE M.	147 Warwick st.	clerk
THISSELL, OVA N.	83 Midland st.	driver

T

THOMPSON, WILLIAM M.....	3	Bachelder pl.....	ice man
THORNE, JOHN jr.....	66	Howard st.....	clerk
THURSTON, CHARLES W....	75	Central st.....	teamster
TIGHE, JOHN	190	Tilden st.....	operative
TILTON, CHARLES E.....	57	So. Walker st.....	compositor
TILTON, FREDERICK N.....	57	So. Walker st.....	printer
TIMMINS, FREDERICK J.....	75	Westford st..	clerk
TITUS, AFTON G.....	46	Barclay st....	checker B. & M. R. R.
TONDRA, JOHN	192	Suffolk st.....	mule spinner
TRUE, DAVID	420	Lincoln st.....	carpenter
TRUE, MITCHELL C.....	606	Westford st.....	clerk
TULLY, OWEN E.....	630	Merrimack st.....	blacksmith
TURNER, HERBERT E.....	16	John st.....	operative
TURNER, JOHN D.....	634	Broadway.....	machinist
TYRRELL, JOHN E.....	483	Lawrence st.....	dealer

U

UNDERWOOD, GEORGE H....	50	Whipple st.....	spinner
URANN, CHARLES F.....	408	Lincoln st.....	foreman

V

VARNUM, CHARLES F.....	75	Smith st.....	carpenter
VARNUM, DANIEL H.....	697	Bridge st.....	real estate
VARNUM, JOSEPH B.....	36	Lane st.....	carpenter
VARNUM, LEAVITT R. J.....		Merrimac House.....	real estate
VARNUM, THOMAS	476	Varnum av.....	farmer
VINEY, WILLIAM B.....	22	Tyler st.....	clerk
VINING, ALONZO H.....	71	Mammoth road.....	carpenter
VINING, HIRAM	36	Fourth av.....	carpenter

W

WADLEIGH, JUDE C.....	139	Hildreth st.....	superintendent
WAHLGREN, CARL A.....	78	Cosgrove st.....	cigar maker
WALKER, THOMAS C.....	80	Chestnut st.....	druggist
WALKER, THOMAS R.....	101	Butterfield st.....	machinist
WALSH, JAMES P.....	164	Coburn st.....	plasterer
WALSH, JOHN F.....	5	Watson st.....	operative
WALSH, WILLIAM H.....	86	Congress st.....	dye
WARREN, CHARLES H.....	25	Princeton st.....	dealer
WARREN, JEREMIAH F.....	27	Cross st.....	painter
WARREN, OSCAR E.....	224	Worthen st.....	operative
WASHBURN, CHARLES D....	84	West Sixth st.....	grocer
WASHBURN, GEORGE B.....	15	Loring st.....	reporter
WATSON, GEORGE B.....	30	First st.....	clerk
WEAVER, FRANK L.....	229	Stevens st.....	roofer
WELCH, WILLIAM F.....	34	Cedar st.....	carpenter
WELLMAN, FRED W.....	111	Stevens st.....	gentleman
WESTWOOD, JOHN S.....	14	Wilsondale pl.....	druggist
WHEELER, ALBERT H.....	710	Merrimack st.....	merchant
WHELAN, JOHN T.....	126	Chapel st.....	leather finisher
WHELTON, MATTHEW	283	School st.....	clerk
WHITCOMB, IRVING	48	So. Walker st.....	dealer
WHITE, GIDEON F.....	78	Gates st.....	dealer
WHITE, HENRY G.....	131	Grove st.....	clerk
WHITEHEAD, JAMES W.....	22	Wamesit st.....	grocer
WHITEKNACT, JAMES H.....	221	Lincoln st.....	shuttle maker
WHITMAN, CHARLES W.....	78	So. Loring st.....	foreman
WHITNEY, FRED H.....	596	Beacon st.....	bookkeeper
WIGHT, GEORGE H.....	93	Durant st.....	piper
WILDER, CHARLES W.....	291	Wilder st.....	dealer
WILDER, OLIVER D	6	Coral st.....	grain dealer
WILDER, WILLIAM F.....	20	Huntington st.....	merchant
WILEY, WALTER P.....	15	Barclay st.....	water works
WILLIAMS, BENJAMIN	456	Fletcher st.....	operative
WILLIS, WILLIAM T.,.....	307	Thorndike st.....	stone mason

W

WILLMAN, CLARENCE T.....	8 Hale st.....	second hand
WILLMAN, DAVID	8 Hale st.....	wool sorter
WILSON, BENJAMIN H.....	7 Robinson st.....	painter
WILSON, JOSEPH M.....	22 Seventh av.....	butcher
WILSON, LEONARD	32 Brooks st.....	teamster
WINN, CHARLES E.....	346 Jackson st.....	manufacturer
WINN, JOHN J.....	29 So. Whipple st.....	mattress maker
WOOD, GEORGE H.....	176 Branch st.....	jeweler
WOODIES, FRED	74 Gates st.....	clerk
WOODIES, WILLIAM H.....	381 Dutton st.....	overseer
WOODSIDE, WILLIAM E.....	37 Laurel st.....	photographer
WOTTON, CHARLES A.....	26 Loring st.....	laundryman
WRIGHT, ATWILL F.....	280 Appleton st.....	retired
WRIGHT, FRANK B.....	57 Willow st.....	carpenter
WRIGHT, WALTER G.....	280 Appleton st.....	machinist

Y

YORKE, JOSEPH B.....	33 Dover st.....	pressman
YOUNG, ARTEMUS S.....	73 Beech st.....	foreman
YOUNG, CHARLES H.....	249 E. Merrimack st.....	machinist
YOUNG, CHARLES M.....	45 Robbins st.....	undertaker
YOUNG, CHARLES S.....	73 Beech st.....	musician
YOUNG, JAMES A.....	585 Broadway.....	motorman
YOUNG, WALTER L.....	1149 Middlesex st.....	T. & S. Mills

